

# **EXHIBIT A**

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*Attorneys for Plaintiffs*

**SUPERIOR COURT OF THE STATE OF CALIFORNIA  
IN AND FOR THE COUNTY OF SANTA CLARA**

NICHOLAS NANEZ, JOHN DIQUISTO,  
CURTIS JACOBSON, HAROLD CHASE,  
VICTORIA MARTIN, KENNETH RADLIFF,  
JOHN CHARCHO, DANIEL DELONG,  
GREGORY CRONIN, MICHAEL MCGUE,  
STEVEN WERNER, ERIN THOMAS,  
STEVEN JARAMILLO, IAN WALLACE,  
GARY AGBIN, CHARLES CARTER,  
MELVIN MEEKS, RICHARD JONES,  
ALFRED LUTZ, MARA CHARCHO, KARLA  
DELONG, HOLLY YIP THOMAS AND  
JOYCE JONES

Plaintiffs,

vs.

3M COMPANY; AGC CHEMICALS  
AMERICAS, INC.; ALLSTAR FIRE  
EQUIPMENT; AMEREX CORPORATION;  
ARCHROMA U.S., INC., ARKEMA, INC.;  
BUCKEYE FIRE EQUIPMENT; CARRIER  
GLOBAL CORPORATION; CHEMGUARD,  
INC.; DYNAX CORPORATION; E. I. DU  
PONT DE NEMOURS & CO.; FIRE SERVICE  
PLUS, INC.; GLOBE MANUFACTURING  
COMPANY LLC; HONEYWELL SAFETY

**Case No:**

**COMPLAINT FOR DAMAGES AND  
INJUNCTIVE RELIEF**

**DEMAND FOR JURY TRIAL**

PRODUCTS USA, INC.; JOHNSON  
CONTROLS, INC.; KIDDE-FENWAL, INC.,  
L.N. CURTIS & SONS; LION GROUP, INC.;  
MALLORY SAFETY AND SUPPLY LLC;  
MINE SAFETY APPLIANCE COMPANY  
LLC; MUNICIPAL EMERGENCY SERVICES  
INC.; NATIONAL FOAM, INC.; PBI  
PERFORMANCE PRODUCTS, INC.,  
PERIMETER SOLUTIONS, LP; STEDFAST  
USA, INC.; TEN CATE PROTECTIVE  
FABRICS USA D/B/A SOUTHERN MILLS  
INC.; THE CHEMOURS COMPANY L.L.C.;  
TYCO FIRE PRODUCTS, L.P.; W. L. GORE &  
ASSOCIATES, INC., and DOES 1 through 25,

Defendants,

Plaintiffs Nicholas Nanez, John DiQuisto, Curtis Jacobson, Harold Chase, Victoria Martin,  
Kenneth Radliff, John Charcho, Daniel DeLong, Gregory Cronin, Michael McGue, Steven Werner,  
Erin Thomas, Steven Jaramillo, Ian Wallace, Gary Agbin, Charles Carter, Melvin Meeks, Richard  
Jones, Alfred Lutz, Mara Charcho, Karla DeLong, Holly Yip Thomas and Joyce Jones by and  
through their attorneys of record, allege as follows:

### **INTRODUCTION**

1. Plaintiffs are 19 current and retired firefighters who have served the cities of San Jose, Cupertino, Santa Clara, Sunnyvale, Campbell and the towns of Los Gatos, Ben Lomond and Zayante as firefighters and worked in various fire stations, engine, truck, and specialized companies in the County of Santa Clara and surrounding counties for decades (collectively, the “Firefighter Plaintiffs”), and four of their spouses (collectively, the “Spouse Plaintiffs”).

2. Plaintiffs bring this action for monetary damages and appropriate equitable and injunctive relief for harm resulting from exposure to per- and polyfluoroalkyl substances (“PFAS”) that were manufactured, designed, sold, supplied, distributed and/or contained in products manufactured, designed, sold, supplied and/or distributed by each of the Defendants, individually or

1 through their predecessors or subsidiaries

2 3. PFAS are human-made chemicals consisting of a chain of carbon and fluorine atoms  
3 used in manufactured products to, *inter alia*, resist and repel oil, stains, heat and water. PFAS include  
4 “long-chain” PFAS made up of seven or more carbon atoms (“long-chain PFAS”) as well as “short-  
5 chain” PFAS made up of six or fewer carbon atoms (“short-chain PFAS”).

6 4. PFAS are known as “forever chemicals” because they are immune to degradation, bio-  
7 accumulate in individual organisms and humans, and increase in concentration up the food chain.  
8 PFAS exposure to humans can occur through inhalation, ingestion and dermal contact.<sup>1</sup>

9 5. PFAS have been associated with multiple and serious adverse health effects in humans  
10 including cancer, tumors, liver damage, immune system and endocrine disorders, high cholesterol,  
11 thyroid disease, ulcerative colitis, birth defects, decreased fertility, and pregnancy-induced  
12 hypertension. PFAS have also been found to concentrate in human blood, bones and organs and,  
13 most recently, to reduce the effectiveness of vaccines, a significant concern in light of COVID-19.  
14 PFAS has also been found to cause epigenetic changes associated with carcinogenesis.

15 6. Unbeknownst to Plaintiffs, Defendants have manufactured, marketed, distributed,  
16 sold, or used PFAS and PFAS-containing materials in protective clothing specifically designed for  
17 firefighters (“turnouts”) and in Class B firefighting foams (“Class B foam”).<sup>2</sup>

18 7. For decades, Defendants were aware of the toxic nature of PFAS and the harmful  
19 impact these substances have on human health. Yet, Defendants manufactured, designed, marketed,  
20 sold, supplied, or distributed PFAS and PFAS chemical feedstock,<sup>3</sup> as well PFAS-containing  
21 turnouts and Class B foam, to firefighting training facilities and fire departments nationally,  
22 including in California and in Santa Clara County. Defendants did so, moreover, without ever

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23  
24 <sup>1</sup> Suzanne E. Fenton, MS, PhD, *PFAS Collection*, Environmental Health Perspectives (February 22,  
2019), <https://ehp.niehs.nih.gov/curated-collections/pfas>.

25 <sup>2</sup> Class B foams are synthetic “soap-like” foams that spread rapidly across the surface of a fuel or  
26 chemical fire to stop the formation of flammable vapors. The most common Class B foam is aqueous  
film-forming foam (or “AFFF”).

27 <sup>3</sup> Chemical feedstock refers to a chemical used to support a large-scale chemical reaction. The PFAS  
28 chemicals utilized to manufacture products containing PFAS are generally referred to herein as  
“chemical feedstock.”

1 informing firefighters or the public that turnouts and Class B foams contained PFAS, and without  
2 warning firefighters or the public of the substantial and serious health injuries that can result from  
3 exposure to PFAS or PFAS-containing materials. Even worse, Defendants concealed the hazardous  
4 toxicity, persistence and bioaccumulation of PFAS, and repeatedly misrepresented the safety of  
5 PFAS or PFAS-containing materials

6 8. The Firefighter Plaintiffs wore turnouts and used and/or were exposed to Class B foam  
7 in the usual and normal course of performing their firefighting duties and training and were  
8 repeatedly exposed to PFAS in their workplace. They did not know and, in the exercise of reasonable  
9 diligence, could not have known that these products contained PFAS or PFAS-containing materials.  
10 They also did not know that PFAS was in their bodies and blood.

11 9. At all relevant times and continuing to the present, Defendants have represented that  
12 their turnouts and Class B foams are safe.

13 10. The Firefighter Plaintiffs did not learn of their PFAS exposure until December 2021  
14 at the earliest, when blood serum tests revealed that they had significantly elevated levels of PFAS  
15 in their blood.

16 11. The Firefighter Plaintiffs use and/or used the turnouts and Class B foam as they were  
17 intended and in a foreseeable manner which exposed them to PFAS in the course of their firefighting  
18 activities. This repeated and extensive exposure to PFAS resulted in cancers and other serious and  
19 life-threatening diseases to the Firefighter Plaintiffs. Their PFAS exposures continue to pose a  
20 significant threat to their personal health due to PFAS' persistence, pervasiveness, toxicity and  
21 bioaccumulation.

22 12. Defendants knowingly and willfully manufactured, designed, marketed, sold, and  
23 distributed chemicals and/or products containing PFAS for use within the State of California when  
24 they knew or reasonably should have known that the Firefighter Plaintiffs would repeatedly inhale,  
25 ingest and/or have dermal contact with these harmful compounds during firefighting training  
26 exercises and in firefighting emergencies, and that such exposure would threaten the health and  
27 welfare of firefighters exposed to these dangerous and hazardous chemicals.

28 13. Plaintiffs bring this action against Defendants and seek damages, together with any

1 appropriate injunctive or other equitable relief.

2 **PARTIES TO THE ACTION**

3 **Plaintiffs**

4 **A. The Firefighter Plaintiffs**

5 14. Nicholas Nanez is an active duty firefighter who has served in the fire service for over  
6 21 years, as a firefighter and fire engineer in the counties of Santa Clara, San Mateo, and Alameda,  
7 and as a volunteer firefighter in the cities of Chico and Saratoga. He is currently employed by the  
8 Santa Clara County Fire Department and is working at Fire Station 82. Nicholas' firefighter training  
9 included incident command; fire suppression for structures, vehicles and grassland (including use and  
10 application of foam); search and rescue; ventilation operations; salvage and overhaul; and emergency  
11 medical training. He also received specialized training in high-rise fires, and low-angle rope rescue  
12 operations. One of Nicholas' most memorable moments was when he responded to a call for a man  
13 who was in cardiopulmonary arrest, provided emergency life support and saved the man's life. In  
14 the course of firefighting training and fire suppression activities, Nicholas routinely wears turnouts  
15 and has used and/or been exposed to Class B foam. Blood serum testing conducted in December  
16 2021 shows his PFAS levels are significantly elevated. Nicholas has been diagnosed with and has  
17 been treated for prostate cancer.

18 15. John DiQuisto followed in the footsteps of his San Jose firefighter father and was in  
19 the San Jose Fire Department for 34 years, working as a firefighter, fire engineer and fire captain. He  
20 spent many years at Fire Station 12, protecting the Blossom Valley district of south San Jose. John's  
21 firefighter training included incident command; fire suppression for structures, vehicles and grassland  
22 (including use and application of foam); search and rescue; ventilation operations; salvage and  
23 overhaul; and emergency medical training. He also received specialized training in high-rise fires,  
24 and low-angle rope rescue operations. John volunteered with the American Red Cross to train  
25 community members in CPR, participated in the Firefighter Chili Cook-Off which raised funding for  
26 the Santa Clara Valley Medical Burn Center, and received special commendations for his  
27 contributions to San Jose Fire Department and the community. One of John's most memorable  
28 experiences was the rescue of a couple trapped in a burning house in the middle of the night. John

1 also delivered two babies during his career. In the course of firefighting training and fire suppression  
2 activities, he routinely wore turnouts and has used and/or been exposed to Class B foam. Blood  
3 serum testing conducted in December 2021 shows his PFAS levels are significantly elevated. John  
4 has been diagnosed with and treated for prostate cancer.

5 16. Curtis Jacobson has been in the fire service for 29 years, 25 years of which were in  
6 the City of San Jose Fire Department and four years have been with the City of Fremont Fire  
7 Department as the fire chief. During the course of his career, he has worked as a firefighter, fire  
8 engineer, fire inspector, fire captain, battalion chief, and deputy chief. Currently, he is a fire chief.  
9 Curtis' firefighter training included incident command; fire suppression for structures, vehicles and  
10 grassland (including use and application of foam); search and rescue; ventilation operations; salvage  
11 and overhaul; and emergency medical training. He also received specialized training in high-rise fire  
12 ground command, fire administration, and completed an executive course at the Harvard Kennedy  
13 School of Government. One of Curtis's contributions to the fire service has been his effort to hire and  
14 promote diverse firefighters, and to foster diversity, inclusion and equity in the fire service. In the  
15 course of firefighting training and fire suppression activities, Curtis routinely wore turnouts and has  
16 used and/or been exposed to Class B foam. Blood serum testing conducted in December 2021 shows  
17 his PFAS levels are significantly elevated. Curtis has been diagnosed with prostate cancer.

18 17. Harold Chase was in the fire service for 37 years at the Santa Clara County Fire  
19 Department. He worked as a firefighter, fire engineer, fire captain, and battalion chief, spending many  
20 years working at Seven Springs Fire Station, serving Cupertino. Harold's firefighter training included  
21 incident command; fire suppression for structures, vehicles and grassland (including use and  
22 application of foam); search and rescue; ventilation operations; salvage and overhaul; and emergency  
23 medical training. He also received specialized training in high-rise fire ground command, low-angle  
24 rope rescue operations, and fire administration. One of the contributions Harold is most proud of is  
25 the professional mentorship and training he provided to firefighters, giving them the tools needed to  
26 promote to company officer. In the course of firefighting training and fire suppression activities,  
27 Harold routinely wore turnouts and has used and/or been exposed to Class B foam. Blood serum  
28 testing conducted in December 2021 shows his PFAS levels are significantly elevated. Harold was

1 diagnosed with and treated for prostate cancer.

2 18. Victoria Martin spent 18 years as a public safety officer for Sunnyvale Department of  
3 Public Safety which required working as both a firefighter and police offer. She spent many years at  
4 the Fire Station 4, protecting the city of Sunnyvale. Victoria's firefighter training included incident  
5 command; fire suppression for structures, vehicles and grassland (including use and application of  
6 foam); search and rescue; ventilation operations; salvage and overhaul; and emergency medical  
7 training. She also received specialized training in infectious disease exposure, high-rise fires, low-  
8 angle rope rescue operations and police officer standardized training (POST) certification. One of  
9 Victoria's most memorable experiences was responding to a call for a child who had drowned and  
10 was unconscious. Victoria provided emergency life support and saved the child's life. In the course  
11 of firefighting training and fire suppression activities, she routinely wore turnouts and has used and/or  
12 been exposed to Class B foam. Blood serum testing conducted in December 2021 shows her PFAS  
13 levels are significantly elevated. Victoria has been diagnosed with and has been treated for breast  
14 cancer.

15 19. Kenneth Radliff worked for 34 years in the fire service, spending 30 years in the for  
16 the Santa Clara County Fire Department as a firefighter, fire engineer and fire captain. He spent many  
17 years at the Sunny Oaks Fire Station, protecting the city of Campbell. Kenneth's firefighter training  
18 included incident command; fire suppression for structures, vehicles and grassland (including use and  
19 application of foam); search and rescue; ventilation operations; salvage and overhaul; and emergency  
20 medical training. He also received specialized training in high-rise fires, and low-angle rope rescue  
21 operations. One of Kenneth's most memorable experiences was the 11-alarm Santa Row fire in San  
22 Jose. Kenneth and his crew were dispatched to a nearby apartment complex and were able to contain  
23 the fire and ensure that no one was hurt. In the course of firefighting training and fire suppression  
24 activities, he routinely wore turnouts and has used and/or been exposed to Class B foam. Blood  
25 serum testing conducted in December 2021 shows his PFAS levels are significantly elevated.  
26 Kenneth has been diagnosed with and treated for malignant melanoma.

27 20. John Charcho also followed in the footsteps of his San Francisco firefighter father and  
28 was in the fire service for 35 years, working as a firefighter, fire engineer, fire captain and arson

1 captain for the San Jose Fire Department and the town of Ben Lomond Fire Department where he  
2 served as fire chief. He spent many years at Fire Station 16, serving the Tropicana District of east San  
3 Jose. John's firefighter training included incident command; fire suppression for structures, vehicles  
4 and grassland (including use and application of foam); search and rescue; ventilation operations;  
5 salvage and overhaul; and emergency medical training. He also received specialized training in high-  
6 rise fires, low-angle rope rescue operations. and arson investigation. John also taught ventilation  
7 training and received special commendations for his work developing high-rise plans and training for  
8 the San Jose Fire Department. One of John's most gratifying experiences occurred when he served  
9 as an arson investigator in which he coordinated an extensive sting operation that resulted in the  
10 apprehension of and conviction of the arson suspect. In the course of firefighting training and fire  
11 suppression activities, he routinely wore turnouts and has used and/or been exposed to Class B foam.  
12 Blood serum testing conducted in December 2021 shows his PFAS levels are significantly elevated.  
13 John has been diagnosed with and treated for prostate cancer.

14 21. Daniel DeLong was in the fire service for over 10 years, working as a firefighter, fire  
15 engineer and fire captain for the San Jose Fire Department. He spent several years at Fire Station 4,  
16 serving the Burbank district of central San Jose, and as a volunteer firefighter for the Zayante Fire  
17 Protection District in Felton, California. Daniel's firefighter training included incident command;  
18 fire suppression for structures, vehicles and grassland (including use and application of foam); search  
19 and rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
20 received specialized training in high-rise fires, and low-angle rope rescue operations. One of Daniel's  
21 most memorable experiences was helping a single mother with her severely disabled adult son.  
22 Daniel and other firefighters worked to help the mother get long-term aid and support. In the course  
23 of firefighting training and fire suppression activities, he routinely wore turnouts and has used and/or  
24 been exposed to Class B foam. Blood serum testing conducted in December 2021 shows his PFAS  
25 levels are significantly elevated. Daniel has been diagnosed with and treated for multiple sclerosis  
26 and prostate cancer.

27 22. Gregory Cronin was in the Santa Clara County Fire Department for 24 years, working  
28 as a firefighter, fire engineer, fire captain and arson investigator. He spent many years at Los Gatos

1 Fire Station, serving the town of Los Gatos. Gregory's firefighter training included incident  
2 command; fire suppression for structures, vehicles and grassland (including use and application of  
3 foam); search and rescue; ventilation operations; salvage and overhaul; and emergency medical  
4 training. He also received specialized training in high-rise fires, low-angle rope rescue operations.  
5 and arson investigation. One of Gregory's most memorable experiences was when he was a captain  
6 on Rescue 3 and responded to a call at California's Great America theme park which required a  
7 complex six-hour rescue of 24 people from a rollercoaster. In the course of firefighting training and  
8 fire suppression activities, he routinely wore turnouts and has used and/or been exposed to Class B  
9 foam. Blood serum testing conducted in December 2021 shows his PFAS levels are significantly  
10 elevated. Gregory has been diagnosed with and treated for oral squamous cell cancer.

11 23. Michael McGue was in the fire service for 36 years at the San Jose Fire Department  
12 and South County Fire Department, working as a firefighter and fire engineer. He worked many years  
13 at Station 1, serving the city of San Jose's downtown district. Michael's firefighter training included  
14 incident command; fire suppression for structures, vehicles and grassland (including use and  
15 application of foam); search and rescue; ventilation operations; salvage and overhaul; and emergency  
16 medical training. He also received specialized training in high-rise fires, and low-angle rope rescue  
17 operations. One of Michael's most memorable experiences was the rescue of a family from an  
18 apartment building fire started by an arsonist. He also delivered two babies during his career. In the  
19 course of firefighting training and fire suppression activities, Michael routinely wore turnouts and  
20 has used and/or been exposed to Class B foam. Blood serum testing conducted in December 2021  
21 shows his PFAS levels are significantly elevated. Michael has been diagnosed with and treated for  
22 prostate cancer.

23 24. Steven Werner was in the Santa Clara County Fire Department for 33 years as a  
24 firefighter, fire captain, and battalion chief. He spent many years working at the Shannon Fire Station,  
25 serving the town of Los Gatos. Steven's firefighter training included incident command; fire  
26 suppression for structures, vehicles and grassland (including use and application of foam); search and  
27 rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
28 received specialized training in high-rise fire ground command, low-angle rope rescue operations,

1 and fire administration. One Steven's most memorable moments occurred during a vehicle accident  
2 where three people were injured including two toddlers. Steve and his crew were able to stabilize,  
3 treat their injuries, and transport them to a hospital. The children returned to the fire station every  
4 year to thank them. In the course of firefighting training and fire suppression activities, Steven  
5 routinely wore turnouts and has used and/or been exposed to Class B foam. Blood serum testing  
6 conducted in December 2021 shows his PFAS levels are significantly elevated. Steven was  
7 diagnosed with and treated for prostate cancer.

8         25. Erin Thomas has been in the fire service for 26 years, working as a firefighter, fire  
9 engineer and fire captain in the Santa Clara County Fire Department for 22 years. He is currently  
10 working at the Cupertino Fire Station 71. Erin's firefighter training included incident command; fire  
11 suppression for structures, vehicles and grassland (including use and application of foam); search and  
12 rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
13 received specialized training in high-rise fires, and low-angle rope rescue operations. One of Erin's  
14 most memorable experiences occurred when he was off-duty on a commercial flight. A passenger  
15 went into cardiac arrest and Erin, another off-duty firefighter and the flight attendant were able to  
16 perform life-saving measures, saving the man. He also has delivered three babies. In the course of  
17 firefighting training and fire suppression activities, Erin routinely wears turnouts and has used and/or  
18 been exposed to Class B foam. Blood serum testing conducted in December 2021 shows his PFAS  
19 levels are significantly elevated. Erin has been diagnosed with and treated for non-Hodgkin's  
20 lymphoma and acute lymphocytic leukemia.

21         26. Steven Jaramillo has been in the Santa Clara Fire Department 28 years, working as a  
22 firefighter and fire engineer. He is currently working at Fire Station 6, serving the city of Santa  
23 Clara's Rivermark district. Steven's firefighter training included incident command; fire suppression  
24 for structures, vehicles and grassland (including use and application of foam); search and rescue;  
25 ventilation operations; salvage and overhaul; and emergency medical training. He also received  
26 specialized training in high-rise fires, and low-angle rope rescue operations. One of Steven's most  
27 memorable experiences occurred on Christmas when he responded to a call for a boy a having seizure.  
28 The boy and his family were homeless. Steven and his crew stabilized the boy, and helped the family

1 get food and lodging. In the course of firefighting training and fire suppression activities, Steven  
2 routinely wears turnouts and has used and/or been exposed to Class B foam. Blood serum testing  
3 conducted in December 2021 shows his PFAS levels are significantly elevated. Steven has been  
4 diagnosed with and treated for renal cell carcinoma.

5 27. Ian Wallace was in the Santa Clara County Fire Department for 33 years, working as  
6 a firefighter, paramedic, fire engineer and fire captain. Ian's firefighter training included incident  
7 command; fire suppression for structures, vehicles and grassland (including use and application of  
8 foam); search and rescue; ventilation operations; salvage and overhaul; and emergency medical  
9 training. He also received specialized training in advance cardiac life support, pediatric advanced  
10 life support, high-rise fires, and low-angle rope rescue operations. One of Ian's proudest memories  
11 was being part of the effort to implement a defibrillator program that provided training to firefighters  
12 and equipped every engine with a defibrillator. Ian also delivered two babies. In the course of  
13 firefighting training and fire suppression activities, he routinely wore turnouts and has used and/or  
14 been exposed to Class B foam. Blood serum testing conducted in December 2021 shows his PFAS  
15 levels are significantly elevated. Ian has been diagnosed with and treated for prostate cancer.

16 28. Gary Agbin has been in the Santa Clara County Fire Department for over 21 years, as  
17 a firefighter and fire engineer, and as a reserve firefighter in the city of Monterey Park. He is currently  
18 working at the Campbell Fire Station. Gary's firefighter training included incident command; fire  
19 suppression for structures, vehicles and grassland (including use and application of foam); search and  
20 rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
21 received specialized training in high-rise fires, and low-angle rope rescue operations. Gary's most  
22 memorable experience was responding to a call for 9 year old girl with severe respiratory distress.  
23 Gary and his crew provided advanced life support to the girl and transported her to the hospital. She  
24 made a complete recovery and came back to the fire station to thank the crew for saving her life. In  
25 the course of firefighting training and fire suppression activities, Gary routinely wears turnouts and  
26 has used and/or been exposed to Class B foam. Blood serum testing conducted in December 2021  
27 shows his PFAS levels are significantly elevated. Gary has been diagnosed with thyroid disease.

28 29. Charles Carter was in the San Jose Fire Department for 40 years, working as a

1 firefighter, and fire engineer. He spent many years at Fire Station 14, protecting serving San Jose's  
2 Westgate district of San Jose. Charles' firefighter training included incident command; fire  
3 suppression for structures, vehicles and grassland (including use and application of foam); search and  
4 rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
5 received specialized training in high-rise fires, low-angle rope rescue operations, and swift-water  
6 rescue. One of Charles' most memorable experiences was the week he spent volunteering at Fire  
7 Department New York Engine 34 /Ladder 21 in Hell's Kitchen which had lost many firefighters in  
8 the September 11, 2001 attack. In the course of firefighting training and fire suppression activities,  
9 Charles routinely wore turnouts and has used and/or been exposed to Class B foam. Blood serum  
10 testing conducted in December 2021 shows his PFAS levels are significantly elevated. Charles has  
11 been diagnosed with and treated for prostate cancer.

12 30. Melvin Meeks has been in the San Jose Fire Department for 24 years, working as a  
13 firefighter, fire engineer and fire captain. He worked at Fire Station 29, serving the North San Jose.  
14 Melvin's firefighter training included incident command; fire suppression for structures, vehicles and  
15 grassland (including use and application of foam); search and rescue; ventilation operations; salvage  
16 and overhaul; and emergency medical training. He also received specialized training in high-rise  
17 fires, and low-angle rope rescue operations. One of Melvin's most gratifying experiences was  
18 organizing a shoe drive in San Jose for Haitian earthquake victims. In the course of firefighting  
19 training and fire suppression activities, Melvin routinely wears turnouts and has used and/or been  
20 exposed to Class B foam. Melvin has been diagnosed with and is being treated for multiple myeloma.

21 31. Richard Jones was in the fire service for 27 years, working at the San Jose Fire  
22 Department for 25 years as a firefighter, fire engineer and fire captain. He spent many years at the  
23 Fire Station 18, protecting the Edenville district of San Jose. Richard's firefighter training included  
24 incident command; fire suppression for structures, vehicles and grassland (including use and  
25 application of foam); search and rescue; ventilation operations; salvage and overhaul; and emergency  
26 medical training. He also received specialized training in high-rise fires, and low-angle rope rescue  
27 operations. During his time in the fire service, Richard was most proud of mentoring younger  
28 firefighters and ensuring that his crew was safe. He also delivered four babies. In the course of

1 firefighting training and fire suppression activities, he routinely wore turnouts and has used and/or  
2 been exposed to Class B foam. Richard has been diagnosed with and is being treated for prostate  
3 cancer.

4 32. Alfred Lutz was in the Santa Clara County Fire Department for 30 years, working as  
5 a firefighter, paramedic, fire engineer and fire captain. He spent many years at the Sunny Oaks Fire  
6 Station, protecting the city of Campbell. Alfred's firefighter training included incident command;  
7 fire suppression for structures, vehicles and grassland (including use and application of foam); search  
8 and rescue; ventilation operations; salvage and overhaul; and emergency medical training. He also  
9 received specialized training in advance cardiac life support, pediatric advanced life support, high-  
10 rise fires, and low-angle rope rescue operations. One of Alfred's most memorable experiences  
11 occurred early in his career when he was in an ambulance with a man who went to into cardiac arrest.  
12 Alfred provided emergency life support and saved the man's life. He also delivered two babies. In  
13 the course of firefighting training and fire suppression activities, he routinely wore turnouts and has  
14 used and/or been exposed to Class B foam. Alfred has been diagnosed with and treated for prostate  
15 cancer.

16 33. The Firefighter Plaintiffs, individually and collectively, allege that PFAS or PFAS-  
17 containing materials developed, manufactured, marketed distributed, released, sold, and/or used by  
18 Defendants in turnouts and Class B foam, as herein alleged, caused them to be exposed to PFAS  
19 and/or PFAS-containing materials. Such exposure was a substantial factor and proximate cause of  
20 the cancers, serious illnesses and bodily injuries suffered by the Firefighter Plaintiffs, as alleged  
21 herein.

22 **B. The Spouse Plaintiff**

23 34. Mara Charcho is the spouse of Firefighter Plaintiff John Charcho. Mara and John were  
24 lawfully married at all times relevant to this action, and now are husband and wife.

25 35. Karla DeLong is the spouse of Firefighter Plaintiff Daniel DeLong. Karla and Daniel  
26 were lawfully married at all times relevant to this action, and now are husband and wife.

27 36. Holly Yip Thomas is the spouse of Firefighter Plaintiff Erin Thomas. Holly and Erin  
28 were lawfully married at all times relevant to this action, and now are husband and wife.

1           37.     Joyce Jones is the spouse of Firefighter Plaintiff Richard Jones. Joyce and Richard  
2 were lawfully married at all times relevant to this action, and now are husband and wife.

3           **C.     Defendants**

4           38.     Defendant 3M Company (a/k/a Minnesota Mining and Manufacturing Company)  
5 (“3M”) is a Delaware corporation that does business throughout the United States, including  
6 conducting business in California. 3M has its principal place of business in St. Paul, Minnesota. 3M  
7 developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials,  
8 and products containing PFAS in turnouts and/or Class B foams, including in California and the  
9 county of Santa Clara.

10          39.     Defendant AGC Chemicals Americas, Inc. (“AGC”) is a Delaware corporation that  
11 does business throughout the United States, including conducting business in California. AGC has its  
12 principal place of business in Exton, Pennsylvania. AGC developed, manufactured, marketed,  
13 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
14 turnouts and/or Class B foams, including in California and the county of Santa Clara.

15          40.     Defendant AllStar Fire Equipment (“AllStar”) is a California corporation that does  
16 business in California. AllStar has its principal place of business in Arcadia, California. AllStar  
17 developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials,  
18 and products containing PFAS in turnouts and/or Class B foams, including in California and the  
19 county of Santa Clara.

20          41.     Defendant Amerex Corporation, also known as Alabama Amerex Corporation,  
21 (“Amerex”) is an Alabama corporation that does business throughout the United States, including  
22 conducting business in California. Amerex has its principal place of business in Trussville, Alabama.  
23 Amerex developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS  
24 materials, and products containing PFAS in turnouts and/or Class B foams, including in California  
25 and the county of Santa Clara.

26          42.     Defendant Archroma U.S., Inc. (“Archroma”) is a North Carolina corporation that  
27 does business throughout the United States, including conducting business in California. Archroma  
28 has its principal place of business in Charlotte, North Carolina. Archroma developed, manufactured,

1 marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing  
2 PFAS in turnouts and/or Class B foams, including in California and the county of Santa Clara.

3 43. Defendant Arkema, Inc. (“Arkema”) is a Pennsylvania corporation that does business  
4 throughout the United States, including conducting business in California. Arkema has its principal  
5 place of business in King of Prussia, Pennsylvania. Arkema developed, manufactured, marketed,  
6 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
7 turnouts and/or Class B foams, including in California and the county of Santa Clara.

8 44. Defendant Buckeye Fire Equipment (“Buckeye”) is a North Carolina corporation that  
9 does business throughout the United States, including conducting business in California. Buckeye  
10 has its principal place of business in Kings Mountain, North Carolina. Buckeye developed,  
11 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
12 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
13 Clara.

14 45. Defendant Carrier Global Corporation (“Carrier”) is a Delaware corporation that does  
15 business throughout the United States, including conducting business in California. Carrier has its  
16 principal place of business in Palm Beach Gardens, Florida. Carrier is the parent of Defendant Kidde-  
17 Fenwal, Inc. Carrier developed, manufactured, marketed, distributed, released, sold, and/or used  
18 PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams, including  
19 in California and the county of Santa Clara.

20 46. Defendant Chemguard, Inc. (“Chemguard”) is a Wisconsin corporation that does  
21 business throughout the United States, including conducting business in California. Chemguard has  
22 its principal place of business in Marinette, Wisconsin. Chemguard developed, manufactured,  
23 marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing  
24 PFAS in turnouts and/or Class B foams, including in California and the county of Santa Clara.

25 47. Defendant Dynax Corporation (“Dynax”) is a New York corporation that does  
26 business throughout the United States, including conducting business in California. Dynax has its  
27 principal place of business in Pound Ridge, New York. Dynax developed, manufactured, marketed,  
28 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in

1 turnouts and/or Class B foams, including in California and the county of Santa Clara.

2 48. Defendant E. I. du Pont de Nemours & Co. (“DuPont”) is a Delaware corporation that  
3 does business throughout the United States, including conducting business in California. DuPont has  
4 its principal place of business in Wilmington, Delaware. DuPont developed, manufactured, marketed,  
5 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
6 turnouts and/or Class B foams, including in California and the county of Santa Clara.

7 49. Defendant Fire Service Plus, Inc. (“Fire Service Plus”) is a Georgia corporation that  
8 does business throughout the United States, including conducting business in California. Fire Service  
9 Plus has its principal place of business in Simi Valley, California. Fire Service Plus developed,  
10 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
11 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
12 Clara.

13 50. Defendant Globe Manufacturing Company, LLC (“Globe”) is a New Hampshire  
14 corporation that does business throughout the United States, including conducting business in  
15 California. Globe has its principal place of business in Pittsfield, New Hampshire. Globe developed,  
16 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
17 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
18 Clara. Defendant Mine Safety Appliance Company acquired Globe Holding Company, LLC and its  
19 subsidiaries (collectively, “MSA/Globe”) in 2017 and continues to do business under the Globe name.

20 51. Defendant Honeywell Safety Products USA, Inc. (“Honeywell”) is a Delaware  
21 corporation that does business throughout the United States, including conducting business in  
22 California. Honeywell has its principal place of business in Charlotte, North Carolina. Honeywell  
23 developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials,  
24 and products containing PFAS in turnouts and/or Class B foams, including in California and the  
25 county of Santa Clara.

26 52. Defendant Johnson Controls, Inc. (“Johnson Controls”) is a Delaware corporation that  
27 does business throughout the United States, including conducting business in California. Johnson  
28 Controls has its principal place of business in Milwaukee, Wisconsin. Johnson Controls is the parent

1 of Defendants Tyco Fire Products, LP and Chemguard, Inc. Johnson Controls developed,  
2 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
3 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
4 Clara.

5 53. Defendant Kidde-Fenwal, Inc. (“Kidde-Fenwal”) is a Delaware corporation that does  
6 business throughout the United States, including conducting business in California. Kidde-Fenwal  
7 has its principal place of business in Ashland, Massachusetts. Kidde-Fenwal developed,  
8 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
9 containing PFAS in turnouts and/or Class B foams, including in California and in the County of Santa  
10 Clara.

11 54. Defendant Lion Group, Inc., (“Lion”) is an Ohio corporation that does business  
12 throughout the United States, including conducting business in California. Lion has its principal  
13 place of business in Dayton, Ohio. Lion developed, manufactured, marketed, distributed, released,  
14 sold, and/or used PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B  
15 foams, including in California and the county of Santa Clara.

16 55. Defendant L.N. Curtis & Sons (“LN Curtis”) is a California corporation that does  
17 business in California. LN Curtis has its principal place of business is Walnut Creek, California. LN  
18 Curtis developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS  
19 materials, and products containing PFAS in turnouts and/or Class B foams, including in California  
20 and the county of Santa Clara.

21 56. Defendant Mallory Safety and Supply, LLC (“Mallory”) is a California corporation  
22 that does business throughout the United States, including conducting business in California. Mallory  
23 has its principal place of business in Longview, Washington. Mallory developed, manufactured,  
24 marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products containing  
25 PFAS in turnouts and/or Class B foams, including in California and the county of Santa Clara.

26 57. Defendant Mine Safety Appliance Company, LLC (“MSA/Globe”) is a Pennsylvania  
27 corporation that does business throughout the United States, including conducting business in  
28 California. MSA has its principal place of business in Cranberry Township, Pennsylvania. MSA

1 acquired Globe Holding Company, LLC and its subsidiaries (collectively, “MSA/Globe”) in 2017  
2 and continues to do business under the Globe name. MSA developed, manufactured, marketed,  
3 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
4 turnouts and/or Class B foams, including in California and the county of Santa Clara.

5 58. Defendant Municipal Emergency Services, Inc. (“MES”) is a Nevada corporation that  
6 does business throughout the United States, including conducting business in California. MES has its  
7 principal place of business in Sandy Hook, Connecticut. MES developed, manufactured, marketed,  
8 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
9 turnouts and/or Class B foams, including in California and the county of Santa Clara.

10 59. Defendant National Foam, Inc., (“National Foam”) is a Pennsylvania corporation that  
11 does business throughout the United States, including conducting business in California. National  
12 Foam has its principal place of business in West Chester, Pennsylvania. National Foam developed,  
13 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
14 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
15 Clara.

16 60. Defendant PBI Performance Products, Inc., (“PBI”) is a Delaware corporation that  
17 does business throughout the United States, including conducting business in California. PBI has its  
18 principal place of business in Charlotte, North Carolina. PBI developed, manufactured, marketed,  
19 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
20 turnouts and/or Class B foams, including in California and the county of Santa Clara.

21 61. Defendant Perimeter Solutions, LP, (“Perimeter Solutions”) is a Delaware corporation  
22 that does business throughout the United States, including conducting business in California.  
23 Perimeter Solutions has a principal place of business in Rancho Cucamonga, California. Perimeter  
24 developed, manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials,  
25 and products containing PFAS in turnouts and/or Class B foams, including in California and the  
26 county of Santa Clara.

27 62. Defendant StedFast USA, Inc. (“StedFast”) is a Delaware corporation that does  
28 business throughout the United States, including conducting business in California. StedFast has its

1 principal place of business in Piney Flats, Tennessee. StedFast developed, manufactured, marketed,  
2 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
3 turnouts and/or Class B foams, including in California and the county of Santa Clara.

4 63. Defendant Ten Cate Protective Fabrics USA d/b/a Southern Mills, Inc. (“Tencate”) is  
5 a Georgia corporation that does business throughout the United States, including conducting business  
6 in California. Tencate has its principal place of business in Senoia, Georgia. Tencate developed,  
7 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
8 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
9 Clara.

10 64. Defendant The Chemours Company, L.L.C. (“Chemours”) is a Delaware corporation  
11 that does business throughout the United States, including conducting business in California.  
12 Chemours has its principal place of business in Wilmington, Delaware. Chemours developed,  
13 manufactured, marketed, distributed, released, sold, and/or used PFAS, PFAS materials, and products  
14 containing PFAS in turnouts and/or Class B foams, including in California and the county of Santa  
15 Clara.

16 65. Defendant Tyco Fire Products, L.P. (“Tyco”) is a Delaware corporation that does  
17 business throughout the United States, including conducting business in California. Tyco has its  
18 principal place of business in Exeter, New Hampshire. Tyco developed, manufactured, marketed,  
19 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
20 turnouts and/or Class B foams, including in California and the county of Santa Clara.

21 66. Defendant W. L. Gore & Associates, Inc., (“Gore”) is a Delaware corporation that  
22 does business throughout the United States, including conducting business in California. Gore has its  
23 principal place of business in Newark, Delaware. Gore developed, manufactured, marketed,  
24 distributed, released, sold, and/or used PFAS, PFAS materials, and products containing PFAS in  
25 turnouts and/or Class B foams, including in California and the county of Santa Clara.

26 67. Plaintiffs are currently unaware of the true names and capacities of Defendants named  
27 herein as DOES 1 through 25, inclusive, and Plaintiffs therefore sue those Defendants by fictitious  
28 names pursuant to California Code of Civil Procedure § 474. Plaintiffs will amend this complaint to

1 state the true names and capacities of those Defendants sued herein as DOES when ascertained.  
2 Plaintiffs allege that each fictitiously named Defendant is in some manner responsible for the acts  
3 alleged herein and that they proximately caused the injuries to Plaintiffs as alleged herein.

4 68. Defendants DOES 1 through 25 are subsidiaries, partners, or other entities that  
5 were involved in the design, development, manufacture, testing, packaging, promotion, marketing,  
6 advertising, distribution, labeling, and/or sale of PFAS, PFAS materials, and products containing  
7 PFAS in the turnouts and/or Class B foams that Firefighter Plaintiffs used, as alleged herein.

8 69. Plaintiffs allege that each named Defendant is in some manner responsible for the acts  
9 alleged herein and that they proximately caused the injuries to Plaintiffs, as alleged herein.

10 70. Plaintiffs allege that each named Defendant derived substantial revenue from the  
11 PFAS, PFAS materials, and products containing PFAS in turnouts and/or Class B foams that  
12 Defendants designed, developed, manufactured, tested, packaged, promoted, marketed, advertised,  
13 distributed, labeled and/or sold within California, and that were used by Firefighter Plaintiffs herein  
14 within California and the county of Santa Clara.

15 71. Defendants expected or should have expected their acts to have consequences within  
16 the State of California, and derived substantial revenue from interstate commerce.

17 72. Defendants purposefully availed themselves of the privilege of conducting activities  
18 within the State of California, thus invoking the benefits and protections of its laws.

### 19 **JURISDICTION AND VENUE**

20 73. This Court has jurisdiction over this action under California Code of Civil Procedure  
21 § 410.10 and Article VI, § 10 of the California Constitution. The injuries and damages alleged herein  
22 are in an amount within the jurisdiction of this Court.

23 74. The Firefighter Plaintiffs' exposure and Plaintiffs' injuries, resulting from the acts of  
24 Defendants alleged herein, occurred in Santa Clara County, California. Venue is proper in this Court  
25 under California Code of Civil Procedure § 395(a).

### 26 **SUBSTANTIVE ALLEGATIONS**

#### 27 **A. The Firefighters Plaintiffs' Use of and Exposure to PFAS-Containing Products**

28

75. The Firefighter Plaintiffs are 19 current and retired firefighters who have served the cities of San Jose, Santa Clara, Sunnyvale, Cupertino, and Campbell and the towns of Los Gatos, Ben Lomond and Zayante as firefighters and worked in various fire stations, engine, truck, and specialized companies in the County of Santa Clara and surrounding counties for decades.<sup>4</sup>

76. As first responders to fire and other emergency and medical calls, the Firefighter Plaintiffs risk their lives on a daily basis. They not only save lives and homes, they provide emergency services and medical care, perform rescues, and offer support to people in traumatic circumstances. To prepare them for this enormously challenging work, the Firefighter Plaintiffs wear turnouts and receive extensive and ongoing training in fire suppression (including the preparation and use of Class B foam), fire prevention, rescue, and emergency medical care action to protect and/or minimize the loss of life, property, and damage to the environment.

77. The City of San Jose Fire Department protects over one million residents and 200 square miles in the third largest city in California and the tenth largest city in the nation. The SJFD is also the emergency service provider for many high-hazard occupancies, including 7 major hospitals (including 3 trauma centers, and 7 emergency departments); the SAP Center (home to the NHL San Jose Sharks); San Jose State University (which has a student population of 31,906); three regional super malls; and over 516 high-rise structures.<sup>5</sup> In 2017-2018, the SJFD responded to 94,500 calls.

78. The City of Santa Clara Fire Department (“SCFD”) serves 175,000 residents, and responds to over 9,000 calls a year, protecting a wide array of occupancies including Silicon Valley businesses, Levi’s Stadium, Santa Clara University, Mission College, the Santa Clara Convention Center, Westfield Valley Fair Mall, and several high-rise hotels, as well as being at the intersection of several main freeways. The SCFD also provides mutual aid response annually for local and regional wildfires across California by staffing three fire engines designated for this response.

79. The Santa Clara County Fire Department serves the largest county in Northern California, providing emergency response to over 226,000 residents in seven West Santa Clara

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<sup>4</sup> The firefighters’ spouses, referred to herein as Spouse Plaintiffs, independently assert claims for loss of consortium as detailed more fully at ¶¶ 287-292, below.

<sup>5</sup> San Jose Fire Department Website, (last visited February 26, 2021), <https://sjff.org/sjfd>.

1 County cities and adjacent unincorporated areas.

2 80. The City of Sunnyvale Department of Public Safety is the largest fully integrated  
3 public safety department in the country in which all personnel are trained as firefighters, police  
4 officers and emergency medical technicians, and serves a population of over 150,000.

5 81. The town of Ben Lomond Fire Protection District (“BLFD”) serves a tight-knit  
6 community of 6,800 people and the surrounding area with just 28 volunteer firefighters.

7 82. The Zayante Fire Protection District (“ZFD”) serves a community of 5,500 residents  
8 and the surrounding area.

9 83. For decades, Defendants, either individually or through their predecessors or  
10 subsidiaries, have manufactured, designed, sold, supplied, and distributed chemical feedstock and/or  
11 turnouts and Class B foam containing PFAS to firefighting training facilities and fire departments  
12 globally, including within the State of California, the county of Santa Clara and neighboring  
13 communities in California.

14 84. With over 5,000 individual chemicals, PFAS is a large and ever-growing category of  
15 human-made chemicals, consisting of a nearly indestructible chain of carbon and fluorine atoms that  
16 are widely used in products to, *inter alia*, resist and repel oil, heat and water, and have been found to  
17 have negative health effects. As detailed below, these toxic chemicals are present in firefighter  
18 turnouts and Class B foam.

19 **(1) PFAS-Containing Turnout Gear**

20 85. During firefighting training and when responding to fires and performing fire  
21 extinguishment, firefighters wear turnouts that are intended to provide a degree of thermal, chemical,  
22 and biological protection for a firefighter. Turnout gear components include a helmet, hood, jacket,  
23 pants, boots, and gloves. Each component is made of an outer layer, as well as several inner layers  
24 that include a moisture barrier and thermal liner which are meant to protect the firefighter from  
25 ambient heat.<sup>6</sup>

26  
27  
28 <sup>6</sup> *What Materials Go Into Making Turnout Gear?*, Globe MSA Safety Website, (last visited September 29, 2021), <https://globe.msasafety.com/selecting-your-gear/materials>.

86. PFAS chemicals are used in turnout gear to impart heat, water, and stain resistance to the outer shell and moisture barrier of turnout gear.

87. A June 2020 study of turnout gear by researchers at the University of Notre Dame analyzed 30 new and used turnout jackets and pants originally marketed, distributed and sold in 2008, 2014, and 2017, by six turnout gear makers, including Defendants MSA/Globe, Lion and Honeywell and found high levels of PFAS in turnout gear worn, used, or handled by firefighters, including the Firefighter Plaintiffs.<sup>7</sup>

88. When exposed to heat, PFAS chemicals in the turnouts off-gas, break down, and degrade into highly mobile and toxic particles and dust,<sup>8</sup> exposing firefighters to PFAS chemicals, particles and dust, including through skin contact/absorption, ingestion (e.g., hand-to-mouth contact) and/or inhalation.<sup>9</sup> Further firefighter exposure to these highly mobile and toxic materials occurs through normal workplace activities, because particles or dust from their turnouts spread to fire vehicles and fire stations, as well as firefighters' vehicles and homes.<sup>10</sup>

89. Such workplace exposure to PFAS or PFAS-containing materials has been found to be toxic to humans. As far back as a July 31, 1980 internal memo, DuPont officials described measures that were needed to prevent workplace exposure to PFOA, which they knew could permeate all protective materials, and noted that PFOA's toxicity varied depending on the exposure pathway, acknowledging that ingestion was "slightly toxic," dermal contact was "slightly to moderately toxic" and inhalation was "highly toxic."<sup>11</sup> The memo concluded "continued exposure is not tolerable."<sup>12</sup>

90. As alleged herein, the Firefighter Plaintiffs wear and/or wore turnouts in the ordinary

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<sup>7</sup> Graham Peaslee et al., *Another Pathway for Firefighter Exposure to Per- and Polyfluoroalkyl Substances: Firefighter Textiles*, Environmental Science & Technology Letters 2020, 7, 8, 594-599 (Ecotoxicology and Public Health) (June 23, 2020) (hereinafter, "the Notre Dame Turnout Study").

<sup>8</sup> A.S. Young et al., *Per- and Polyfluoroalkyl Substances (PFAS) and Total Fluorine in Fire Station Dust*, J. Expo. Sci. Environ. Epidemiology (2021), <https://doi.org/10.1038/s41370-021-00288-7>.

<sup>9</sup> *Id.*

<sup>10</sup> *Id.*

<sup>11</sup> Robert Bilott, *Exposure* (2019), pg. 174.

<sup>12</sup> *Id.* at pg. 175.

1 course of performing their duties, as the turnouts were intended to be used and in a foreseeable  
2 manner, which exposed them to significant levels of PFAS.

3 91. The Firefighter Plaintiffs did not know, and in the exercise of reasonable diligence  
4 could not have known, that the turnouts they wore or used in the course of performing their duties  
5 contained PFAS or PFAS-containing materials, and similarly did not know and could not have known  
6 that they routinely suffered exposure to PFAS or PFAS-containing materials in the turnouts they wore  
7 or used in performing their duties. The turnout gear worn or used by the Firefighter Plaintiffs did not  
8 and does not contain labeling information saying that the gear contains PFAS, and similarly did not  
9 and does not warn the Firefighter Plaintiffs of the health risks associated with exposure to PFAS.

10 92. Like fire departments across the country, many Plaintiffs only had one set of turnouts  
11 for years, and would wash their turnouts at home and/or in station machines along with their daily  
12 station wear uniforms.

13 **(2) PFAS-Containing Class B Foam**

14 93. Class B foam is one of the primary tools used by firefighters for suppression of fires  
15 and is particularly effective for extinguishing fires involving oil and/or chemicals common at  
16 transportation accidents, aircraft accidents, and chemical spills. Class B foam is also used in  
17 structural or other types of non-chemical fires when water cannot penetrate deeply enough to ensure  
18 that unseen fire is extinguished. The most common Class B foam is aqueous film-forming foam  
19 (“AFFF”). AFFF and other Class B foams contain PFAS.

20 94. To use Class B foam, a Class B foam concentrate must first be mixed with water.

21 95. Class B foam concentrate is typically sold in five-gallon containers that firefighters  
22 are responsible for storing on the fire engine and/or pouring into the foam bladder of the fire engine.  
23 To mix the foam concentrate and water from a fire engine that is not pre-plumbed for foam, an eductor  
24 must be placed in the foam concentrate to draw up the concentrate and mix it with water to create a  
25 thick, foamy substance. Firefighters are responsible for this process of preparing the foam, applying  
26 the foam and for cleaning the equipment (hoses, nozzles, etc.) after use.

27 96. The process of preparing and applying Class B foam, applying the foam, and then  
28 cleaning the equipment after foam use causes exposure to PFAS through skin contact, inhalation, or

1 ingestion (e.g., hand-to-mouth contact). The Class B foam containers used by Plaintiffs and their fire  
2 departments to mix and prepare the Class B foam for use did not say that the foam contains PFAS,  
3 and did not warn Plaintiffs of the serious health risks associated with exposure to PFAS.

4 97. Class B foam is used in fire extinguishment in a manner typical of routine methods of  
5 fire extinguishment—by being sprayed through a fire hose, appliance or nozzle.

6 98. The techniques used for “laying a blanket” of Class B foam in fire extinguishment  
7 include: banking the foam off a wall or vertical surface to agitate the foam before it covers the fire;  
8 or applying it to the ground surface where the fire is burning. In structure fires, it can also be necessary  
9 to spray the ceilings, walls and floors. Reapplication of foam is often necessary because the foam  
10 blanket will break down over a short time.



22 99. These techniques are used routinely in firefighting training as well as in real-world  
23 fire extinguishment, and result in firefighters being sprayed or entirely soaked with Class B foam,  
24 walking in and through Class B foam (which can reach thigh- or even waist-high), or kneeling in  
25 Class B foam during use – all as depicted in the exemplar photographs below. As a result, the  
26 techniques cause exposure to PFAS through skin contact, inhalation, or ingestion (e.g., hand-to-  
27 mouth contact).





100. As alleged herein, the Firefighter Plaintiffs used and/or were exposed to Class B foam in the ordinary course of performing their duties as it was intended to be used and in a foreseeable manner which exposed them to significant levels of PFAS.

101. The Firefighter Plaintiffs did not know, and in the exercise of reasonable diligence, could not have known that the Class B foam they used and/or were exposed to in the course of performing their duties contained PFAS or PFAS-containing materials, and similarly did not know and could not have known that they routinely suffered exposure to PFAS or PFAS-containing materials in the Class B foam they used and/or were exposed to in performing their duties.

102. These exposures to PFAS or PFAS-containing materials resulted in serious and life-threatening diseases to the Firefighter Plaintiffs, and continue to pose a significant health threat to them given the bioaccumulation, pervasiveness and persistence of PFAS.

#### **B. The Chemical Structure of PFAS Makes Them Harmful to Human Health**

103. PFAS are known as “forever chemicals” because they are immune to degradation, bio-

1 accumulate in individual organisms and humans, and increase in concentration up the food chain.<sup>13</sup>  
 2 Indeed, scientists are unable to estimate an environmental half-life (i.e. the time it takes for 50% of  
 3 the chemical to disappear) for PFAS.<sup>14</sup> Additionally, some PFAS chemicals (known as “precursors”)  
 4 degrade into different long-chain PFAS chemicals.<sup>15</sup>

5 104. PFAS are nearly indestructible and are highly transportable.<sup>16</sup> PFAS exposure to  
 6 humans can occur through inhalation, ingestion, or dermal contact.<sup>17</sup>

7 105. PFAS chemicals include “older” long-chain PFAS like PFOA, PFOS, and PFNA that  
 8 have seven or more carbon atoms, and “newer” short-chain PFAS, like PFBA, PFBS, PFHxA, and  
 9 PFHxS. The PFAS chemical industry has repeatedly asserted that short-chain PFAS are safer and  
 10 bio-degrade more easily than long-chain PFAS. However, short-chain PFAS are molecularly similar  
 11 to long-chain PFAS, and recent scientific research conducted in 2020 shows that short-chain PFAS  
 12 are in fact extremely persistent, highly mobile and transportable, almost impossible to remove from  
 13 water, bio-accumulate in humans and the environment, and show similar toxicity as long-chain  
 14 PFAS.<sup>18</sup> Short-chain PFAS also have lower technical performance and may therefore be used at

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15  
 16 <sup>13</sup> *Perfluoroalkyl and Polyfluoroalkyl Substances (PFAS)*, National Institute of Environmental Health  
 17 Sciences (last visited September 30, 2021),  
<https://www.niehs.nih.gov/health/topics/agents/pfc/index.cfm>.

18 <sup>14</sup> *Id.*

19 <sup>15</sup> *Id.* at fn. 8; Monica Amarello, *Study: Almost All Fluorine Detected in Fire Stations’ Dust Is From*  
 20 *Unknown “Forever Chemicals,”* Environmental Working Group (February 5, 2021),  
<https://www.ewg.org/release/study-almost-all-fire-stations-dust-unknown-forever-chemicals>.

21 <sup>16</sup> *Toxicological Profile for Perfluoroalkyls, see Relevance to Public Health*, Agency for Toxic  
 22 Substances & Disease Registry, (last visited October 19, 2021),  
<https://www.atsdr.cdc.gov/toxprofiles/tp200.pdf>.

23 <sup>17</sup> *Id.* at pgs. 3-4; Ketura Persellin, *Study: PFAS Exposure Through Skin Causes Harm Similar to*  
 24 *Ingestion*, Environmental Working Group (January 13, 2020), [https://www.ewg.org/news-](https://www.ewg.org/news-insights/news/study-pfas-exposure-through-skin-causes-harm-similar-ingestion)  
[insights/news/study-pfas-exposure-through-skin-causes-harm-similar-ingestion](https://www.ewg.org/news-insights/news/study-pfas-exposure-through-skin-causes-harm-similar-ingestion).

25 <sup>18</sup> Cheryl Hogue, *Short-chain and long-chain PFAS show similar toxicity*, *US National Toxicology*  
 26 *Program says*, Chemical and Engineering News, (August 24, 2019),  
<https://cen.acs.org/environment/persistent-pollutants/Short-chain-long-chain-PFAS/97/i33>; David  
 27 Andrews, *FDA Studies: ‘Short-Chain’ PFAS Chemicals More Toxic Than Previously Thought*,  
 28 Environmental Working Group (March 9, 2020), <https://tinyurl.com/y3lbq7by>; Stephan Brendel et  
 al., *Short-chain Perfluoroalkyl Acids: Environmental Concerns and A Regulatory Strategy Under*  
*REACH*, Environmental Sciences Europe, Vol. 30, 1 (2018),  
<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5834591/>; Tom Neltner, *The Elephant in the Room*:  
 (footnote continued)

1 higher quantities cancelling out any supposed benefits of lower bioaccumulation potential.<sup>19</sup>

2 106. In October 2021, the U.S. Environmental Protection Agency (“EPA”) updated its 2018  
3 assessment of short-chain PFAS, also known as “GenX,” finding that two of Defendant Chemours  
4 GenX chemicals are *more toxic* than PFOA—the highly toxic chemical they were intended to  
5 replace.<sup>20</sup>

6 107. To date, there is no safe, acceptable or “normal” level of PFAS in the human body.  
7 Further, the fact that PFOA, PFOS, PFHxS, PFHpA, and PFNA are often found together presents a  
8 substantial risk to human health. Defendants’ assertions that their products are safe because they do  
9 not contain PFOA or PFOS, or because they contain short-chain PFAS is just another example of  
10 their efforts to deflect from the reality that there are thousands of PFAS – including precursor PFAS  
11 which degrade into PFOA and PFOS.<sup>21</sup>

12 108. PFAS exposure affects nearly every system in the human body.<sup>22</sup> It has been  
13 associated with multiple and serious adverse health effects in humans including, but not limited to,  
14 cancer, tumors, liver damage, immune system and endocrine disorders, thyroid disease, ulcerative  
15 colitis, birth defects, decreased fertility, pregnancy-induced hypertension, accelerated changes in  
16 gene expression, and increases in oxidative stress which can contribute to DNA changes, tumor

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20 *Potential Biopersistence of Short-Chain PFAS*, Environmental Defense Fund, (February 20, 2019),  
<http://blogs.edf.org/health/2019/02/20/potential-biopersistence-short-chain-pfas/>.

21 <sup>19</sup> Martin Scheringer et al., *Helsingør Statement on Poly- and Perfluorinated Alkyl Substances*  
(PFASs), Chemosphere (June 14, 2014),  
22 <https://www.sciencedirect.com/science/article/pii/S004565351400678X>.

23 <sup>20</sup> Cheryl Hogue, *US EPA Deems Two GenX PFAS Chemicals More Toxic than PFOA*, Chemical &  
Engineering News (October 28, 2021), [https://cen.acs.org/environment/persistent-pollutants/US-](https://cen.acs.org/environment/persistent-pollutants/US-EPA-deems-two-GenX-PFAS-chemicals-more-toxic-than-PFOA/99/i40)  
24 [EPA-deems-two-GenX-PFAS-chemicals-more-toxic-than-PFOA/99/i40](https://cen.acs.org/environment/persistent-pollutants/US-EPA-deems-two-GenX-PFAS-chemicals-more-toxic-than-PFOA/99/i40).

25 <sup>21</sup> Technical Fact Sheet - Perfluorooctane Sulfonate (PFOS) and Perfluorooctanoic Acid (PFOA),  
United States Environmental Protection Agency, (Nov. 2017),  
26 [https://www.epa.gov/sites/production/files/2017-](https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf)  
27 [12/documents/ffrrofactsheet\\_contaminants\\_pfos\\_pfoa\\_11-20-17\\_508\\_0.pdf](https://www.epa.gov/sites/production/files/2017-12/documents/ffrrofactsheet_contaminants_pfos_pfoa_11-20-17_508_0.pdf).

28 <sup>22</sup> Kelly Lenox, *PFAS Senate Hearing, Birnbaum’s Expert Scientific Testimony*, Environmental  
Factor, National Institute of Environmental Health Sciences (May 2019),  
<https://factor.niehs.nih.gov/2019/5/feature/1-feature-pfas/index.htm>.

1 promotion, and other health conditions.<sup>23</sup> It has also been found to concentrate in human blood,  
 2 bones and organs, and to reduce the effectiveness of certain vaccines, a significant concern in light  
 3 of COVID-19.<sup>24</sup>

4 **C. Defendants Knowingly Manufactured, Developed, Marketed, Distributed,**  
 5 **Supplied and/or Sold Toxic PFAS and/or Products Containing PFAS**

6 109. Defendants have each marketed, developed, distributed, sold, promoted,  
 7 manufactured, released, or otherwise used PFAS chemicals in products, including in PFAS-  
 8 containing turnout gear and Class B foam, throughout the United States and in California.

9 110. PFAS were first developed in the 1930s and 1940s. Soon after, 3M began  
 10 manufacturing a PFAS material called perfluorooctanoic acid (“PFOA”), selling it to other  
 11 companies, including DuPont.

12 111. By the 1950s, PFAS were widely used in large-scale manufacturing. Prior to this,  
 13 PFAS had never been detected in nor were present in human blood or bodies.

14 112. In the 1960s, Class B foam containing PFAS entered the global market and became  
 15 the primary firefighting foam all over the world with 3M as one of the largest manufacturers.

16 113. In the 1970s, Defendants National Foam and Tyco began to manufacture, market and  
 17 sell Class B foam containing PFAS, followed by Defendants Chemguard and Dynax in the 1990s,  
 18 and Defendant Buckeye in the 2000s.

19 114. Founded in 1918, Defendant MSA/Globe began manufacturing, marketing and selling  
 20 turnout gear with DuPont’s NOMEX® PFAS-containing flame resistant fabric in 1966. MSA/Globe

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21 <sup>23</sup> A. Koskela et al., *Perfluoroalkyl substances in human bone: concentrations in bones and effects*  
 22 *on bone cell differentiation*, Scientific Reports, (July 28, 2017),  
 23 [https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5533791/pdf/41598\\_2017\\_Article\\_7359.pdf](https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5533791/pdf/41598_2017_Article_7359.pdf);  
 24 *National Toxicology Program Technical Report on the Toxicology and Carcinogenesis Studies of*  
 25 *Perfluorooctanoic Acid Administered in Feed to Sprague Dawley (Hsd: Sprague Dawley SD) Rats*,  
 26 *National Toxicology Program*, (May 2020),  
 27 [https://ntp.niehs.nih.gov/ntp/htdocs/lt\\_rpts/tr598\\_508.pdf](https://ntp.niehs.nih.gov/ntp/htdocs/lt_rpts/tr598_508.pdf); Jaclyn Goodrich et al., *Per- and*  
 28 *Polyfluoroalkyl Substances, Epigenetic Age and DNA Methylation: A Cross-Sectional Study of*  
*Firefighters*, *Epigenomics* (October 2021), <https://pubmed.ncbi.nlm.nih.gov/34670402/>.

<sup>24</sup> *Id.* (Koskela study); Tasha Stolber, *PFAS Chemicals Harm the Immune System, Decrease Response*  
 to Vaccines, *New EWG Review Finds*, Environmental Working Group (November 12, 2020),  
<https://www.ewg.org/news-and-analysis/2020/11/pfas-chemicals-harm-immune-system-decrease-response-vaccines-new-ewg>.

(under the Globe name) continues to manufacture, market and sell turnout gear using PFAS-containing fabrics supplied by its partners, DuPont, Gore, Tencate, and PBI.<sup>25</sup>

115. Defendant Lion began to manufacture, market and sell turnout gear in 1970. Since its founding, and continuing through to the present, Lion makes, markets and sells turnout gear using PFAS-containing fabrics, including Teflon® F-PPE-treated thermal lining material supplied by Defendants DuPont's NOMEX® PFAS-containing flame/water/oil-resistant fabric, and moisture barrier fabrics supplied by Defendant Gore.<sup>26</sup>

116. Defendant Honeywell acquired Norcross Safety Products LLC in 2008, entering the protective gear industry and becoming one of the leading manufacturers of turnouts. Honeywell makes, markets and sells turnout gear using PFAS-containing fabrics, supplied by Defendants DuPont, Gore, PBI and StedFast.

#### **D. Defendants Know Exposure to PFAS Causes Serious Health Impacts**

117. Defendants, including specifically 3M and DuPont, have long known about the serious and significant impacts to health caused by exposure to PFAS, having conducted study after study on the exposure and health effects of PFAS on animals, and in some cases, even on their own employees. The findings of these studies were discussed within the companies internally, yet were never made public or shared with any regulatory agencies. Among the findings:

- a. A 1950 3M study showed that PFAS could build up in the blood of mice and that PFAS could bind to proteins in human blood suggesting that PFAS would not only remain, but also persist and accumulate in the body of the exposed individuals with each additional exposure.<sup>27</sup>
- b. In 1961, a DuPont toxicologist warned that PFAS chemicals enlarge rat and

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<sup>25</sup> See *Globe History*, Globe MSA Safety Website, (last visited February 26, 2021), <https://globe.msasafety.com/history>; *Turnout Gear Materials*, Globe MSA Safety Website, (last visited February 26, 2021), <https://globe.msasafety.com/materials>.

<sup>26</sup> See *Our History*, Lion Website (last visited September 29, 2021), <http://www.lionprotects.com/lion-history>; *Firefighter Turnouts*, Lion Website (last visited September 29, 2021), <https://www.lionprotects.com/firefighter-turnout-gear#>.

<sup>27</sup> Timeline - *For 50 Years, Polluters Knew PFAS Chemicals Were Dangerous But Hid Risks From Public*, Environmental Working Group, (2019), [https://static.ewg.org/reports/2019/pfa-timeline/3M-DuPont-Timeline\\_sm.pdf](https://static.ewg.org/reports/2019/pfa-timeline/3M-DuPont-Timeline_sm.pdf); see also, <https://www.ewg.org/pfastimeline/>.

1 rabbit livers.<sup>28</sup> A year later, these results were replicated in studies with  
2 dogs.<sup>29</sup>

3 c. In 1963, 3M's technical handbook classified PFAS as toxic and advised that  
4 "due care should be exercised in handling these materials."<sup>30</sup>

5 d. In 1970, a company that purchased 3M's firefighting foam had to abandon a  
6 test of the product because all the fish died.<sup>31</sup>

7 e. In the 1970s, DuPont discovered that there were high concentrations of PFOA  
8 in the blood samples of factory workers at DuPont's Washington Works  
9 site.<sup>32</sup>

10 f. By the end of the 1970s, studies performed by, at least 3M, indicated that  
11 PFAS materials were resistant to environmental degradation and would  
12 persist in the environment.<sup>33</sup>

13 g. In 1981, 3M, which still supplied PFOA to DuPont and other corporations,  
14 found that ingestion of PFOA caused birth defects in rats. 3M reported this  
15 information to DuPont. DuPont then tested the children of pregnant  
16 employees in their Teflon division and found that of seven births, two  
17 children had eye defects. Defendants reassigned the female employees, but  
18 did not inform the EPA or make this information public.<sup>34</sup>

19 h. In 1988, a company that purchased PFAS firefighting foam complained to  
20 3M because the product was not biodegradable as 3M represented.<sup>35</sup>  
21 Subsequently, a 3M employee wrote an internal memo that "3M should stop  
22 perpetrating the myth that these fluorochemical surfactants are biodegradable,  
23 but the company continued to sell them."<sup>36</sup>

24 i. By at least the end of the 1980s, research performed by Defendants, including  
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26 <sup>28</sup> *Id.*

27 <sup>29</sup> Nathaniel Rich, *The Lawyer Who Became DuPont's Worst Nightmare*, New York Times (June  
28 6, 2016), <https://www.nytimes.com/2016/01/10/magazine/the-lawyer-who-became-duponts-worst-nightmare.html>.

<sup>30</sup> *Id.* at fn. 27.

<sup>31</sup> *Id.*

<sup>32</sup> *Id.*

29 <sup>33</sup> *PFCS: Global Contaminants: PFCs Last Forever*, Environmental Working Group, (April 3, 2003),  
<https://www.ewg.org/research/pfcs-global-contaminants/pfcs-last-forever>.

<sup>34</sup> *Id.* at fn. 27.

30 <sup>35</sup> *The Devil They Knew: PFAS Contamination and the Need for Corporate Accountability, Part II*,  
Transcript of Hearing Before the Subcommittee on Environment of the Committee on Oversight and  
Reform, House of Representatives (September 19, 2019),  
<https://docs.house.gov/meetings/GO/GO28/20190910/109902/HHRG-116-GO28-Transcript-20190910.pdf>.

<sup>36</sup> *Id.*

specifically, Defendants 3M and DuPont, manufacturing and/or using PFAS materials indicated that at least one such PFAS material, PFOA, caused testicular tumors in a chronic cancer study in rats, resulting in at least Defendant DuPont classifying such PFAS material internally as a confirmed animal carcinogen and possible human carcinogen.<sup>37</sup>

- j. In the 1990s, Defendant DuPont knew that PFOA caused cancerous testicular, pancreatic and liver tumors in lab animals. One study also suggested that PFOA exposure could cause possible DNA damage.<sup>38</sup> Another study of workers found a link between PFOA exposure and prostate cancer.<sup>39</sup>
- k. In response to the alarming and detrimental health impact, DuPont began to develop an alternative to PFOA and in 1993, an internal memo announced that “for the first time, we have a viable candidate” that appeared to be less toxic and showed less bioaccumulation.<sup>40</sup> DuPont decided against using this potentially safer alternative, however, because products manufactured with PFOA were worth \$1 billion in annual profit.<sup>41</sup>
- l. On June 30, 2000, 3M and DuPont met to share 3M’s “pertinent data on PFOA”. 3M informed DuPont that the half-life of PFOA was much longer than animal studies showed.<sup>42</sup>

118. Additionally, approximately fifty years of studies by Defendants, including by 3M and DuPont, on human exposure to PFAS found unacceptable levels of toxicity and bio-accumulation, as well as a link to increased incidence of liver damage, various cancers, and birth defects in humans exposed to PFAS.<sup>43</sup> These studies also revealed that, once in the body, PFAS has a very long half-life and that it takes years before even one-half of the chemicals begins to be eliminated from the body—assuming, of course, the body experiences no additional PFAS chemical exposure.<sup>44</sup>

119. In the face of these findings, and despite passage of the Toxic Substances Control Act in 1976, which requires companies that manufacture, process or distribute chemicals to immediately report to the EPA information that “reasonably supports the conclusion” that a chemical presents a

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<sup>37</sup> *Id.* at fn. 27.

<sup>38</sup> *Id.*

<sup>39</sup> *Id.*

<sup>40</sup> *Id.*

<sup>41</sup> *Id.*

<sup>42</sup> Internal DuPont Memorandum, DuPont Haskell Laboratory Visit (June 30, 2000), <https://www.ag.state.mn.us/Office/Cases/3M/docs/PTX/PTX1721.pdf>.

<sup>43</sup> *Id.* at fn. 27.

<sup>44</sup> *Id.*

1 substantial risk to health or the environment, Defendants did not inform the EPA, Plaintiffs, or the  
 2 public about the health impacts resulting from exposure to PFAS.<sup>45</sup> Indeed, in at least some instances,  
 3 Defendants' own attorneys advised the companies to conceal their damaging findings on PFAS,  
 4 which they did for decades.<sup>46</sup>

5 120. In 2000, 3M announced that it would cease manufacturing a specific PFAS chemical,  
 6 PFOS, as well as Class B foam, on the same day the EPA announced that PFOA and PFOS, two  
 7 chemicals in the PFAS family, had a "strong tendency to accumulate in human and animal tissues  
 8 and could potentially pose a risk to human health and the environment over the long term."<sup>47</sup>

9 121. However, 3M did not recall PFOS, its chemical feedstock, or any Class B foam that it  
 10 had previously manufactured, sold, or distributed, or that was then stored at firehouses and being used  
 11 by firefighters around the country. And, no other Defendant stopped manufacturing PFAS chemicals  
 12 or products containing PFAS. Rather, Defendants continued to manufacture, develop, market,  
 13 promote, distribute and sell PFAS chemicals and PFAS-containing products, including specifically  
 14 PFAS-containing turnouts, and Class B foams and did so without any warning to firefighters or to the  
 15 public concerning the fact that these turnouts and foams contained PFAS, or that they posed a serious  
 16 health risk to human health. Defendants instead continued to claim their products were safe.

17 122. By the 2000s, Defendants' own research of its employees revealed multiple adverse  
 18 health effects among workers who had been exposed to PFAS, including increased cancer incidence,  
 19 hormone changes, lipid changes, and thyroid and liver impacts.<sup>48</sup>

20 123. In 2001, a class action lawsuit was filed in West Virginia against DuPont on behalf of  
 21 people whose water had been contaminated by the nearby DuPont chemical plant where PFAS  
 22 chemicals were manufactured.

23 124. Defendants continued to manufacture, market, promote, distribute, and sell PFAS and  
 24 \_\_\_\_\_

25 <sup>45</sup> *Id.*

26 <sup>46</sup> *Id.* at fn. 35.

27 <sup>47</sup> *EPA and 3M Announce Phase Out of PFOS*, Press Release, United States Environmental Protection  
 Agency (May 16, 2000),  
 28 [https://archive.epa.gov/epapages/newsroom\\_archive/newsreleases/33aa946e6cb11f35852568e1005246b4.html](https://archive.epa.gov/epapages/newsroom_archive/newsreleases/33aa946e6cb11f35852568e1005246b4.html).

<sup>48</sup> *Id.* at fn. 27.

1 PFAS-containing products, including turnouts and Class B foam, and continued to publicly claim that  
 2 these products were safe. Defendants affirmatively suppressed independent research on PFAS, and  
 3 instead commissioned research and white papers to support their claims that PFAS and PFAS-  
 4 containing products were safe to use, engaging consultants to further this strategy and ensure that  
 5 they would continue to profit from these toxic chemicals and products.

6 125. As one consultant wrote in pitching its services to DuPont, it was critical that the PFAS  
 7 industry develop an aggressive strategy to “[discourage] governmental agencies, the plaintiffs’ bar  
 8 and misguided environmental groups” and “[implement] a strategy to limit the effect of litigation and  
 9 regulation on the revenue stream generated by PFOA.” The strategy was further described by  
 10 consultant as follows:

11 DUPONT MUST SHAPE THE DEBATE AT ALL LEVELS. . . .The outcome of  
 12 this process will result in the preparation of a multifaceted plan to take control of the  
 13 ongoing risk assessment by the EPA, looming regulatory challenges, likely litigation,  
 14 and almost certain medical monitoring hurdles. The primary focus of this endeavor  
 15 is to strive to create the climate and conditions that will obviate, or at the very least,  
 16 minimize ongoing litigation and contemplated regulation relating to PFOA. ***This***  
 17 ***would include facilitating the publication of papers and articles dispelling the***  
 18 ***alleged nexus between PFOA and teratogenicity as well as other claimed harm.*** We  
 19 would also lay the foundation for creating Daubert precedent to discourage additional  
 20 lawsuits.<sup>49</sup>

21 126. Class B foam manufacturers and distributors adopted a similarly aggressive industry  
 22 campaign to evade government oversight or public attention of the risks posed by their products. At  
 23 a March 2001 meeting of the National Fire Protection Association’s Technical Meeting on Foam,  
 24 which included Defendant Class B foam manufacturers Tyco, Chemguard and National Foam, a 3M  
 25 representative informed attendees that 3M had discontinued its Class B foam business, citing  
 26 concerns about the “proven pervasiveness, persistence and toxicity” of PFOS.<sup>50</sup> Attendees also were  
 27 informed of evidence that telomer-based fluorosurfactants (used by every Class B foam manufacture

28 <sup>49</sup> Letter from P. Terrence Gaffney, Esq of The Weinberg Group to Jane Brooks, Vice President,  
 Special Initiatives, DuPont de Nemours & Company, regarding PFOA (April 29, 2003).

<sup>50</sup> NFPA-11 Technical Committee Meeting Notes (National Fire Protection Association for Standards  
 on Low-, Medium- and High-Expansion Foam) (March 14-15, 2001),  
<https://assets.documentcloud.org/documents/4178280/NFPA-Schedule.pdf>.

except 3M) degrade to PFOA and, worse, exhibit an even greater degree of pervasiveness and toxicity than PFOA.

127. On or about the same time, certain Defendants, including at least Tyco, DuPont, Dynax, Kidde-Fenwal, and Buckeye, founded and/or became members of the Fire Fighting Foam Coalition (“FFFC”) – a non-profit organization of manufacturers, distributors and suppliers of Class B foam (specifically AFFF). The FFFC’s self-described role was to be “the environmental voice for users and manufacturers of AFFF”<sup>51</sup> – one designed to ignore the health impacts of exposure to PFAS-containing Class B foams such as AFFF:

Not too long ago, 3M had environmental concerns about a chemical in their product and decided to withdraw from the AFFF market. Even though no other manufacturers used the questionable chemical, the withdrawal of 3M from AFFF production raised a red flag. As a direct result, a lot of half-truths and misinformation published by some well-meaning, but misinformed, groups began to surface. One organization went so far as to label our products as "hazardous waste" and as posing an "occupational health or environmental hazard." At the same time, the Federal government was focusing its attention on the industry and needed to identify an industry representative that could provide fact-based information and serve as a focal point for dialogue. We decided, therefore, to form the FFFC in order to educate, inform and help persuade regulatory and legislative decision-makers that firefighting foams are a value-added component to any firefighting capability.<sup>52</sup>

128. Defendants also pivoted with a new industry strategy. Defendants continued to produce Class B foams containing PFAS and continued to publicly represent that PFAS and/or products containing PFAS were safe, while developing newer, “short-chain” PFAS alternatives.

129. In 2005, the EPA fined DuPont \$16.5 million for failing to submit decades of toxicity studies of PFOA (one PFAS chemical manufactured by the company).<sup>53</sup> In the face of and undeterred by the EPA’s action, Defendant turnout manufacturers, such as MSA/Globe and Lion, partnered with DuPont and with Defendant Gore to develop, manufacture, market, distribute and/or sell turnouts

<sup>51</sup> Fire Fighting Foam Council Website (last visited September 29, 2021), <https://www.fffcc.org/afff-update>.

<sup>52</sup> *Id.* at <https://web.archive.org/web/20020811142253/http://www.fffcc.org/about.html> (captured August 11, 2002).

<sup>53</sup> Michael Janofsky, *DuPont to Pay \$16.5 Million for Unreported Risks*, New York Times (December 5, 2005), <https://www.nytimes.com/2005/12/15/politics/dupont-to-pay-165-million-for-unreported-risks.html>.

made with DuPont’s and/or Gore’s PFAS-based textile coatings (e.g., Nomex® and Gore® Protective Fabrics).<sup>54</sup>

130. In 2006, the EPA “invited” eight PFOA manufacturers, including Defendants DuPont, 3M, and Arkema, to join in a “Global Stewardship Program” and phase out production of PFOA by 2015.<sup>55</sup>

131. By this time, Defendants had begun to aggressively manufacture, market and/or distribute short-chain PFAS, such as Gen X, claiming that these alternative PFAS chemicals did not pose significant health risks to humans or the environment. But, these claims, too, were false. Defendants knew that certain of these short-chain PFAS chemicals had been found in human blood, and that at least one of them produces the same types of cancerous tumors (testicular, liver, and pancreatic) in rats as had been found in long-chain PFAS studies.<sup>56</sup>

132. In 2011, a C8 Science Panel convened as part of a settlement in the West Virginia DuPont water contamination case described in paragraph 117, above, began releasing its findings. The Panel had analyzed the blood serum of nearly 70,000 residents living in the water contamination area for two long-chain PFAS (PFOA and PFOS), and found significant negative human health effects (including, kidney cancer, testicular cancer, ulcerative colitis, thyroid disease, high cholesterol and preeclampsia) associated with exposure to these PFAS chemicals in the area groundwater.

133. In 2013, DuPont entered an agreement with the EPA and ceased production and use of PFOA – just one of thousands of PFAS chemicals the company makes, promotes and sells. Defendants, however, continued manufacturing short-chain PFAS materials, chemical feedstock, and products—all the while peddling them as safer, and as more easily bio-degraded than long-chain

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<sup>54</sup> *DuPont and LION Collaborate to Better Protect Firefighters and First Responders*, Press Release, DuPont and LION (January 30, 2013), [https://www.prweb.com/releases/dupont\\_protection\\_tech/lion\\_turnout\\_gear/prweb10362363.htm](https://www.prweb.com/releases/dupont_protection_tech/lion_turnout_gear/prweb10362363.htm); *Our Partners*, Globe Website (last visited February 13, 2022), <https://globe.msasafety.com/our-partners>; and *Firefighter & Emergency Response Protection*, DuPont Website (last visited February 26, 2021), <https://www.dupont.com/personal-protection/firefighter-protection.html>.

<sup>55</sup> *PFOA Stewardship Program*, United States Environmental Protection Agency (last visited February 13, 2022), <https://www.epa.gov/assessing-and-managing-chemicals-under-tsca/risk-management-and-polyfluoroalkyl-substances-pfas#tab-3>.

<sup>56</sup> Sharon Lerner, *New Teflon Toxin Causes Cancer in Lab Animals*, The Intercept (March 3, 2016), <https://theintercept.com/2016/03/03/new-teflon-toxin-causes-cancer-in-lab-animals/>.

1 PFAS, despite evidence to the contrary.<sup>57</sup>

2 134. In 2015, DuPont spun-off its PFAS chemicals business, as well two-thirds of its  
3 environmental liabilities and 90% of its active litigation, to Defendant Chemours. As part of the  
4 transaction, DuPont required Chemours to indemnify the “new” DuPont for all assigned  
5 environmental liabilities should a regulatory agency or plaintiff seek to hold the “new” DuPont  
6 accountable. As Chemours President Paul Kirsch testified before Congress: “DuPont designed the  
7 separation of Chemours to create a company where it could dump its liabilities to protect itself from  
8 environmental cleanup and related responsibilities.”<sup>58</sup>

9 135. In June 2018, the Agency for Toxic Substances and Disease Registry (ASTDR), a  
10 division of the Centers for Disease Control and Prevention at the US Department of Health and  
11 Human Services released an 852-page draft toxicology report analyzing scientific data about the most  
12 common PFAS chemical variants, finding that PFAS “are potentially more hazardous than previously  
13 known, are particularly concerning because of these compounds’ persistence in the environment and  
14 widespread prevalence—PFAS are extremely slow to biodegrade.”<sup>59</sup>

15 136. In September 2019, DuPont chief operations and engineering officer Daryl Roberts  
16 testified before Congress that the “new DuPont” (to be distinguished from the “old DuPont” which  
17 manufactured and sold PFAS for decades before being spun-off to Chemours) no longer uses or  
18 manufactures PFAS and is no longer responsible for obligations and harms resulting from over 65  
19 years of producing PFAS.<sup>60</sup> Roberts remarked that he knew nothing about “old DuPont’s” efforts to  
20 suppress research on PFAS’ toxicity as testified to by one of DuPont’s former scientists only a few  
21 days earlier.<sup>61</sup> Finally, he stated that any liabilities from “old DuPont’s” PFAS operations were now  
22 Chemours’ problem because DuPont is essentially a completely new company with no past – only a

23  
24 <sup>57</sup> *Id.* at fn. 18, *see* Tom Neltner, <http://blogs.edf.org/health/2019/02/20/potential-biopersistence-short-chain-pfas/>.

25 <sup>58</sup> *Id.* at fn. 35.

26 <sup>59</sup> *A Toxic Threat: Government Must Act Now on PFAS Contamination at Military Bases*, Center for  
27 Science and Democracy (September 2018),  
<https://www.ucsusa.org/sites/default/files/attach/2018/09/a-toxic-threat-pfs-military-fact-sheet-ucs-2018.pdf>.

28 <sup>60</sup> *Id.* at fn. 35.

<sup>61</sup> *Id.*

1 bright future of doing good in the world.<sup>62</sup>

2 **E. Defendants Failed to Warn Plaintiffs of the Dangers of Exposure to PFAS and**  
 3 **Falsely Represented That Their PFAS Products Were Safe**

4 137. As alleged above, Defendants knew that PFAS are persistent, toxic, and bio-  
 5 accumulating with a very long half-life. They knew that exposure to PFAS can cause serious and life-  
 6 threatening diseases, including cancer.

7 138. Yet, Defendants *did not warn* Plaintiffs that PFAS and Defendants' PFAS-containing  
 8 products, including turnouts and Class B foams used by the Firefighter Plaintiffs, contained PFAS,  
 9 or that exposure to PFAS in the normal and intended use of such products, causes serious bodily harm  
 10 and illnesses, including cancer.

11 139. Instead, Defendants falsely represented—and continue to falsely represent—that  
 12 PFAS and PFAS-containing products, including turnouts and Class B foams, are safe and not harmful  
 13 to humans or the environment.

14 140. Such assertions fly in the face of science and a global movement toward eliminating  
 15 this class of chemicals from consumer products. In just this past year, for example, Congress passed  
 16 legislation to address PFAS in turnouts and foam,<sup>63</sup> and numerous states have severely restricted  
 17 and/or banned PFAS-containing firefighting foam. For example, California will require sellers of  
 18 turnout gear to notify purchasers if it contains PFAS, while Colorado has banned PFAS-containing  
 19 turnouts as of 2022.<sup>64</sup> The U.S. Food and Drug Administration similarly has called for phasing out  
 20

21 <sup>62</sup> *Id.*

22 <sup>63</sup> Ryan Woodward, *Congress Passes Legislation to Address PFAS Chemicals Impacting*  
 23 *Firefighters*, Fire Rescue 1, (December 17, 2020), <https://www.firerescue1.com/legislation-funding/articles/congress-passes-legislation-to-address-pfas-chemicals-impacting-firefighters-Sp8MFif5dAbD4ZrI/>.

24 <sup>64</sup> Andrew Wallender, *Toxic Firefighting Foam With PFAS Scrutinized by Multiple States*,  
 25 Bloomberg Law (June 18, 2020), <https://news.bloomberglaw.com/pfas-project/toxic-firefighting-foam-with-pfas-scrutinized-by-multiple-states>; Cheryl Hogue, *California Bans PFAS Firefighting*  
 26 *Foams*, Chemical & Engineering News (October 1, 2020), <https://cen.acs.org/environment/persistent-pollutants/California-bans-PFAS-firefighting-foams/98/i38#:~:text=California%20is%20halting%20the%20sale,US%20market%20to%20do%20so>  
 27 [so](https://cen.acs.org/environment/persistent-pollutants/California-bans-PFAS-firefighting-foams/98/i38#:~:text=California%20is%20halting%20the%20sale,US%20market%20to%20do%20so); Marianne Goodland, *While Dozens of Bills Are Getting Axed, A Bill on Firefighting Chemicals*  
 28 *Sails On*, Colorado Politics (May 28, 2020), <https://www.coloradopolitics.com/legislature/while->  
 (footnote continued)

of short-chain PFAS that contain 6:2 fluorotelomer alcohol (6:2 FTOH).<sup>65</sup> And private companies like Home Depot, Lowes and Staples recently have begun to discontinue selling products containing any PFAS, as have several outdoor, durable clothing companies (e.g. Columbia and Marmot), clothing retailers (e.g. H&M, Levi Strauss & Co), shoe companies (e.g. Adidas and New Balance), car seat manufacturers (e.g. Britax and Graco), furniture companies (e.g. IKEA), personal care companies (e.g. Johnson & Johnson and Oral-B), and textile manufacturing companies.<sup>66</sup>

**(1) Defendants Provide No Safety Warnings on Product Labels**

141. Plaintiffs allege that the packaging on the PFAS-containing Class B foam containers used for mixing Class B foam with water, and for spraying and laying foam blankets for fire suppression or fire suppression training, contained no warning that the Class B foam contained PFAS. Nor did it inform persons handling or using the foam as it was intended to be handled that such use can result in exposure to PFAS and serious bodily harm.

142. Below are photos typical of some of the Class B foam containers manufactured, marketed, distributed, or sold by Defendants in California that Firefighter Plaintiffs were exposed to in training or in fire suppression during their firefighting careers. The labels on the containers warn only of possible skin or eye irritation, and suggest rinsing areas of contact with water. They contain *no information* about the Class B foam containing PFAS or PFAS-containing materials, and provide *no warning whatsoever* of the human health risks and serious health conditions associated with PFAS exposure resulting from the normal and intended use of Class B foam in fire suppression or fire

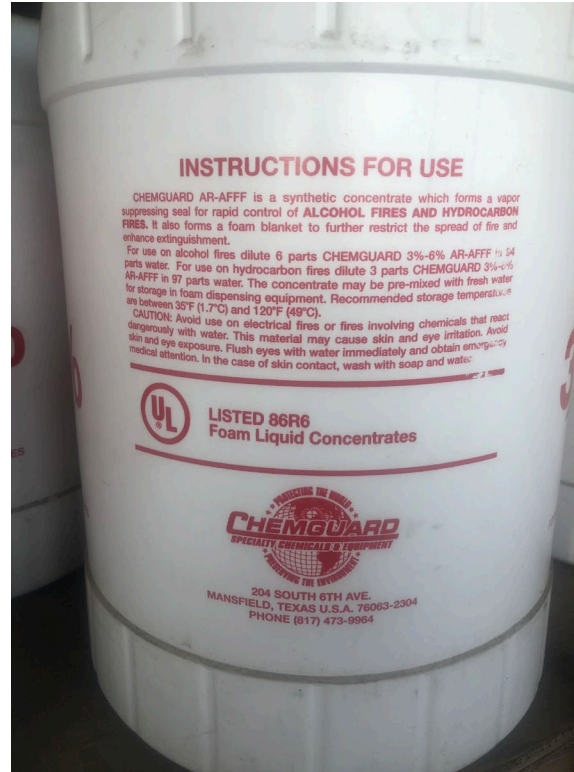
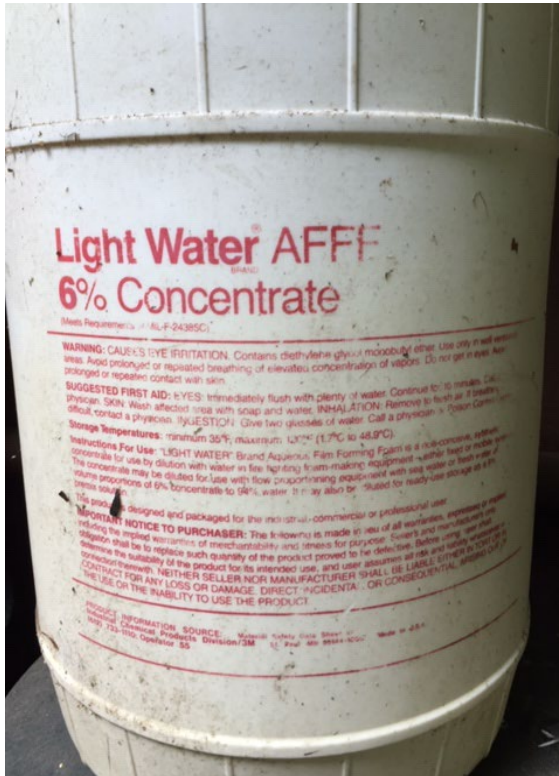
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[dozens-of-bills-are-getting-axed-a-bill-on-firefighting-chemicals-sails-on/article\\_1b1e05f2-a11e-11ea-a270-230a36e06594.html](https://www.wscff.org/legislature-takes-strongest-stand-yet-to-phase-out-pfas-in-firefighting-foam/); *Legislature Takes Strongest Stand Yet to Phase out PFAS in Firefighting Foam*, Washington State Council of Fire Fighters (March 5, 2020), <https://www.wscff.org/legislature-takes-strongest-stand-yet-to-phase-out-pfas-in-firefighting-foam/>;

<sup>65</sup> *FDA Announces the Voluntary Phase-Out by Industry of Certain PFAS Used in Food Packaging*, U.S. Food and Drug Administration, July 31, 2020, <https://www.fda.gov/food/cfsan-constituent-updates/fda-announces-voluntary-phase-out-industry-certain-pfas-used-food-packaging>.

<sup>66</sup> Muhannad Malas, *Home Depot, Lowe's and Staples Take Action to Protect Their Customers from PFAS and Other Harmful Toxics Lurking in Carpets and Office Supplies*, Environmental Defence (November 5, 2019), <https://environmentaldefence.ca/2019/11/05/home-depot-lowes-staples-protect-customers-toxics/>; *PFAS-Free Products*, PFAS Central, (last visited February 15, 2021), <https://pfascentral.org/pfas-free-products/>.

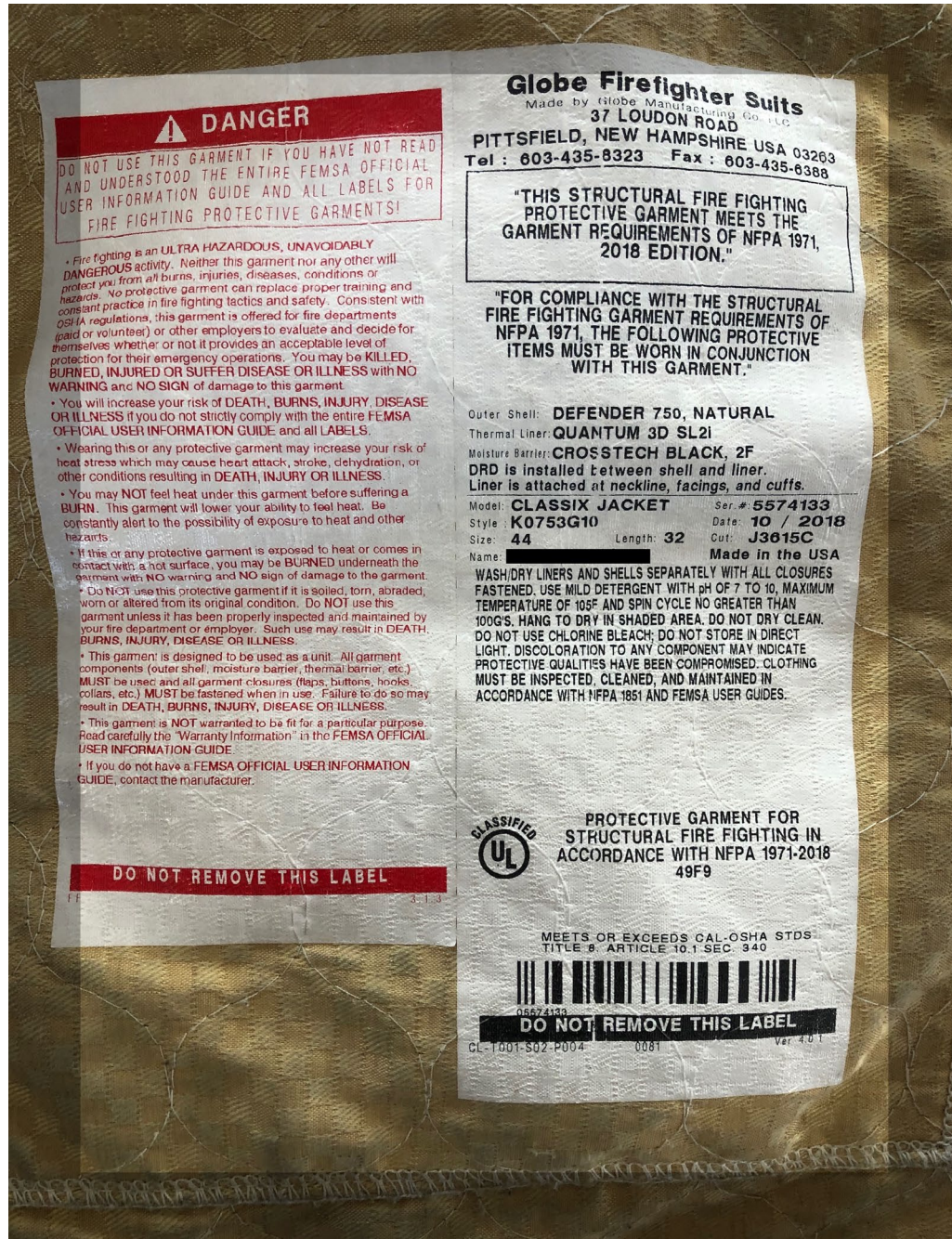
1 suppression training.



143. Plaintiffs further allege that turnouts containing PFAS or PFAS materials sold by Defendants in California, and used by the Firefighter Plaintiffs in training, emergency incidents, or in fire suppression during their firefighting careers, also contained no warning that the turnouts contain PFAS or PFAS materials. Nor did these labels inform persons handling, wearing, or using the turnouts as they were intended to be handled, worn or used can result in exposure to PFAS and serious bodily harm.

144. Below are photos typical of warning labels for turnouts manufactured, marked, sold and distributed by Defendants MSA/Globe and Lion. As depicted below, the labels do not disclose that the PFAS or PFAS materials in the turnouts are toxic, and contain no warning that handling, wearing, or using the turnouts as they were intended to be handled, worn or used can result in exposure to PFAS and serious bodily harm. Further, while the labels provide washing instructions, the instructions do not advise that turnouts should be washed in a commercial extractor to prevent cross-contamination and PFAS-exposure to family members who handle or wash the turnouts with

other garments in home washing machines.



## Garment Safety Label

**⚠ DANGER**

You must read and understand these warnings and instructions. Failure to follow these warnings and instructions will result in serious injury or death.

6150

- Wear this garment **ONLY** FOR FIREFIGHTING ACTIVITIES.
- THIS GARMENT DOES NOT PROVIDE PROTECTION AGAINST CBRN TERRORISM AGENTS.
- Before wearing this garment, you must read and understand the User Instruction, Safety and Training Guide provided with this garment. The guide explains: 1. critical safety information and protective clothing limitations, 2. proper sizing/adjustment, 3. procedures for putting on and removing protective clothing, 4. how to clean/decontaminate, inspect and store this garment, 5. use consistent with NFPA1500, 6. limitations on useful life and retirement procedures.
- You should wear this garment only if you have been properly trained in firefighting techniques, and have knowledge of the proper selection, fit, use, care and limitations of protective clothing and equipment.
- To obtain a free user guide, write Lion  
@ 7200 Poe Ave., Suite 400 Dayton, OH 45414  
or call 1-800-421-2926.
- This garment provides limited protection against heat and flame. Minimize exposure to heat. You may be burned without warning or without receiving damage to garment. Avoid contact with hot objects. Skin burns occur when skin reaches a temperature of 118°F. Fires burn at temperatures up to 2000°F.
- Moisture and/or compression in your garment may reduce protection.
- Exertion in hot conditions may result in heat exhaustion or poor judgment. If you feel dizziness, dehydration, loss of focus, or shortness of breath, get to a safe area, remove this garment, and seek medical attention.
- Do not use this garment if it is damaged or dirty; garments will NOT provide the intended protection. ALWAYS follow manufacturer's cleaning instructions.
- This garment has limited useful life. You must inspect regularly and retire when appropriate according to the User Instruction, Safety and Training Guide. See also NFPA 1851.

DO NOT REMOVE OR WRITE ON THIS LABEL!

## Garment Cleaning Label

**LION**

Questions, write or call immediately:  
Lion  
7200 Poe Ave., Suite 400 Dayton, OH 45414. 1-800-421-2926

6484

**CLEANING AND STORAGE INSTRUCTIONS**

- Users must clean, inspect, maintain, store and alter only in accordance with the User Instruction, Safety and Training Guide.
- Never use chlorine bleach. Chlorine bleach will significantly compromise the protection afforded by textile and film materials utilized in the construction of this garment.
- For coats only, remove DRD and launder DRD by hand washing with mild detergent and warm water.
- Fasten all hooks and D-rings and turn inside out or place in a laundry bag.
- Machine wash, warm water, using only liquid detergent and if needed, liquid non-chlorine bleach. Double rinse in cool water. Never use fabric softeners.
- Never dry clean.
- Dry by hanging in open area, out of direct or indirect sunlight and fluorescent light.
- Store out of direct or indirect sunlight and fluorescent light.

THIS STRUCTURAL FIRE FIGHTING PROTECTIVE GARMENT MEETS THE GARMENT REQUIREMENTS OF NFPA 1971, 2013 EDITION.

PROTECTIVE GARMENT FOR STRUCTURAL FIRE FIGHTING IN ACCORDANCE WITH NFPA 1971-2013, 58F8

When worn with the inner liner and outer shell assembled together, this garment meets the personal protective equipment criteria of US Dept. of Labor OSHA Bloodborne Pathogens Standard, Title 29 CFR, Part 1910.1030, and CAL-OSHA Standard Title 8 Section 3406.

Rev. 1.0 12112

DO NOT REMOVE OR WRITE ON THIS LABEL

## Garment Information Label

**Janesville**

CROSSTECH MOISTURE BARRIER (PTFE)  
GLIDE 2L ARAFL0 E-89 (K) THERM LINER  
NOMEX E-89 QUILT  
REQ: 401971  
MFG DATE: 10/5/2012  
CUT: 10426AA006  
MODEL: CVFM  
LINER: C2K7CVFM  
SIZE: 4632R

0000652642

## Garment Liner Attachment Safety Label

**⚠ WARNING**

FOR COMPLIANCE WITH THE STRUCTURAL FIRE FIGHTING GARMENT REQUIREMENTS OF NFPA 1971, THE FOLLOWING PROTECTIVE ITEMS MUST BE WORN IN CONJUNCTION WITH THIS GARMENT: OUTER SHELL 7.0 OZ MINIMUM WEIGHT

This INNER LINER alone does not provide protection against heat, flame, chemical or biological hazards. NEVER wear this INNER LINER without the SAME SIZE AND MODEL OUTER SHELL, as identified on labels located on each detachable component.

To reduce the risk of injury or death, you must assemble and wear together ALL of the following items:  
1. protective coat and pant with outer shell, attached inner liner and DRD installed in coat  
2. gloves  
3. boots  
4. helmet with eye protection  
5. protective hood  
6. SCBA  
7. PASS device  
ALWAYS make sure that all ensemble layers have the proper overlap and that all items fit with adequate looseness. Tight fit lowers insulation protection and restricts mobility.

MADE IN THE U.S.A.

DO NOT REMOVE OR WRITE ON THIS LABEL!

FW 6151

## Draq Rescue Device (DRD) Label

## (2) Defendants' MSDS Sheets Do Not Warn About PFAS or PFAS Exposure

145. A Material Safety Data Sheet (or "MSDS") is a document that Occupational Safety and Health Administration (OSHA) requires companies to provide to end users for products that contain substances or chemicals that are classified as hazardous or dangerous. Access to such information is necessary for the Firefighter Plaintiffs to provide a safe and effective response in emergency situations.

146. The MSDS provided with Defendants' Class B foams did not – and to this day do not – state that these foams contain PFAS or PFAS-containing materials; that PFAS is persistent, toxic and bio-accumulating; or that PFAS exposure causes serious bodily harm. To the contrary, the MSDS falsely stated that the Class B foams and/or their contents were *not* known carcinogens and did not cause birth defects.

147. Even now, the MSDS do not reflect the known serious health risks and hazards

1 associated with exposure to PFAS in these Class B foams. For example, a MSDS updated on as  
 2 recently as May 19, 2021 by Defendant National Foam for AFFF stated the product *was not*  
 3 *considered carcinogenic* - contrary to decades of science.<sup>67</sup>

### 4 (3) Defendants' Fraudulent Concealment and About PFAS Continue to this 5 Day

6 148. Despite their decades of knowledge about PFAS and its dangers, Defendants continue  
 7 to make false claims, continue to misrepresent the safety of PFAS, and continue to minimize and fail  
 8 to warn about the hazards of exposure to PFAS, or turnouts and Class B foams made with or  
 9 containing PFAS.

10 149. As alleged above, Defendants' misinformation campaign is long-standing, and  
 11 continues to this day. Some pertinent examples include:

- 12 a. 2017 – Defendant Lion's President, Stephen Schwartz, wrote a letter to the editor  
 13 of the Columbus Dispatch, expressing outrage at the assertion in a government  
 14 filing that firefighter may have been exposed to PFAS through turnout gear.  
 15 Schwartz called this assertion false, stating that Lion's turn-out gear is not  
 16 treated or made with PFOS or PFOA: "PFOAs and PFOSs have never been  
 17 components of Lion's turn-out gear, either as a coating or as a textile." He  
 18 acknowledged that turn-out gear is treated with PTFE to provide a durable water  
 19 repellant, and that the textile industry in the past had used PFOA as a processing  
 20 aid to manufacture PTFE moisture barrier films and repellants. "It is possible  
 21 that trace amounts may have been present as a residue when the films and  
 22 finishes were incorporated into Lion's turn-out gear. ***However, based on all  
 available scientific data, such nominal trace amounts, if they existed at all,  
 would not have posed any health risk to firefighters. There is absolutely no  
 connection at all between PFOS and firefighter turnout gear.***" (Emphasis  
 added).<sup>68</sup>

- 23 b. 2018 – The National Fire Protection Association (which maintains committees  
 24 on foams and turnouts that are comprised, in part, of certain Defendants) issued

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25 <sup>67</sup> National Foam Safety Data Sheet for Centurion (TMC6) 6% Aqueous Film Forming Foam  
 26 Concentrate (AFFF) (May 19, 2021) [https://nationalfoam.com/wp-](https://nationalfoam.com/wp-content/uploads/sites/4/NMS340_Centurion-6-AFFF-Concentrate_052192021.pdf)  
 27 [content/uploads/sites/4/NMS340\\_Centurion-6-AFFF-Concentrate\\_052192021.pdf](https://nationalfoam.com/wp-content/uploads/sites/4/NMS340_Centurion-6-AFFF-Concentrate_052192021.pdf).

28 <sup>68</sup> Letter from LION president Stephen A. Schwartz to Ala D. Miller, Editor, The Columbus Dispatch  
 (October 30, 2017), [http://files.constantcontact.com/bf8abd7a001/01f5d727-d72e-42dc-971b-](http://files.constantcontact.com/bf8abd7a001/01f5d727-d72e-42dc-971b-caa9c2855800.pdf)  
[caa9c2855800.pdf](http://files.constantcontact.com/bf8abd7a001/01f5d727-d72e-42dc-971b-caa9c2855800.pdf).

a publication listing 11 ways to minimize risk of occupational cancer – the suggestions centered on wearing turnouts for protection resulting from combustion or spills, and cleaning turnouts after exposure to chemicals. There was not a single mention of avoiding contact with foam and/or the risks of wearing turnouts containing PFAS or PFAS-containing materials.<sup>69</sup>

- c. 2019 – Defendant Lion issued a Customer Safety Alert for PFOA and Turnout Gear stating: “Your Lion turnout gear continues to be safe and ready for action especially when properly maintained. It is extremely important that firefighters continue to wear and properly care for their gear to stay safe on the job.”
- d. 2019 – Defendant 3M Vice President, Denise Rutherford, testified before Congress that she *absolutely agreed with the statement that “the weight of current scientific evidence does not show that PFOS or PFOA cause adverse health effects in humans at current rates of exposure.”* (emphasis added).<sup>70</sup>
- e. 2019 - The Fire Fighting Foam Council (of which many Defendants have been members since its inception in 2001) wrote in their newsletter that: “Short-chain (C6) fluorosurfactants do not contain or breakdown in the environment to PFOS or PFOA and are currently considered lower in toxicity and have significantly reduced bio-accumulative potential than long-chain PFAS.”<sup>71</sup>
- f. Defendant Dynax founder Eduard Kleiner stated that C6-based surfactants [short-chain PFAS] do not bioaccumulate.<sup>72</sup>
- g. 2019 – Defendant Gore issued a public statement, stating that “the potential exposures and associated risks of cancer effects from PFOA alternative and non-polymeric perfluoroalkyl substances in Gore Components [turnout gear] are insignificant.”<sup>73</sup>

<sup>69</sup> *11 Best Practices for Preventing Firefighter Cancer Outlined in New Report Put Out by VCOS and NVFC*, National Fire Protection Association Xchange (August 16, 2018), <https://community.nfpa.org/community/nfpa-today/blog/2018/08/16/11-best-practices-for-preventing-firefighter-cancer-outlined-in-new-report-put-out-by-vcos-and-nvfc>.

<sup>70</sup> Gabe Schneider, *3M Grilled over PFAS Chemicals at Congressional Hearing*, MinnPost (September 11, 2019), <https://www.minnpost.com/national/2019/09/3m-grilled-over-pfas-chemicals-at-congressional-hearing/>.

<sup>71</sup> *AFFF Update Newsletter*, Fire Fighting Foam Council (April 2019), <https://tinyurl.com/y57c5jwx>.

<sup>72</sup> Marc S. Reisch, *What Is the Price of Fire Safety?*, Chemical & Engineering News (January 14, 2019), [https://cen.acs.org/business/specialty-chemicals/price-fire-safety/97/i2?ref=search\\_results](https://cen.acs.org/business/specialty-chemicals/price-fire-safety/97/i2?ref=search_results).

<sup>73</sup> W. L. Gore and Associates, *Exposure Assessment and Cancer Risk Characterization for Firefighters from Non-Polymeric PFAS Residuals in Gore Components Used in Firefighting Gear*, (August 20, 2019), (footnote continued)

- h. 2020 - FluoroCouncil – the lobbying arm of the PFAS industry – maintains that PFAS fluorotelomers that are in Class B foam and turnouts do not cause cancer, disrupt endocrine activity, negatively affect human development or reproductive systems, do not build up in the human body, and do not become concentrated in the bodies of living organisms.<sup>74</sup>
- i. 2020 – The Fire Fighting Foam Council website states: “The short-chain (C6) fluorosurfactants that have been the predominant fluorochemicals used in fluorotelomer-based AFFF for the last 25 years are low in toxicity and not considered to be bio-accumulative based on current regulatory criteria.”<sup>75</sup>
- j. 2020 – The Fire Fighting Foam Council’s Best Practice Guidance for Use of Class B Foam - which was published in May 2016 and has not been updated to reflect the latest research - focuses entirely on eliminating and containing foam to minimize impact on the environment. It makes no mention of how to minimize the impact on firefighters who routinely handle, prepare, spray, or use Class B foam during training or in firefighting.<sup>76</sup>
- k. 2020 – Defendant Lion-hired consultant Paul Chrostowski, PhD took out a full-page in Firefighter Nation to argue that turnout gear is completely safe and any evidence to the contrary, including the Notre Dame study, is unreliable and fear-mongering. “[E]ven if PFAS were found in their turnout gear, at this time there is no credible evidence that it ends up in firefighters’ bodies in amounts that would be higher than the general population.... the connection between PFAS and cancer is extremely weak. The few peer-reviewed epidemiological studies that have found an association were not statistically significant and inconsistent with other studies.... The materials used in turnout gear are the safest materials available, and without them, firefighters would be at extreme risk for burns and exposure to known cancer-causing toxic chemicals present on the fireground, as well as metabolic heat stress.... Alternative materials tried by the U.S. fire

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<https://www.goretexprofessional.com/sites/tof/files/pdfs/Firefighter%20Exposure%20Assessment%20Short%20Chain%20Non%20Polymer%20Residual.pdf>.

<sup>74</sup> *An Important Update About FluoroCouncil*, FluoroCouncil, Global Industry Council for Fluoro Technology (<https://portal.ct.gov/DEEP/Remediation--Site-Clean-Up/PFAS-Task-Force/Pollution-Prevention-Committee>) - see “Resources” -- Fluorocouncil PFAS Information (August 23, 2019).

<sup>75</sup> *Fact Sheet on AFFF Fire Fighting Agents*, Fire Fighting Foam Council (2017), <https://tinyurl.com/yyxscyas>.

<sup>76</sup> *Best Practice Guidance for Use of Class B Firefighting Foams*, Fire Fighting Foam Council (May 2016), <https://tinyurl.com/2kzdsed9>.

service thus far have proven to be unsafe.”<sup>77</sup>

- l. 2020 – Defendant Lion through its hired consultant Chrostowski also stated in Firefighter Nation that all turnouts are compliant with the standards set by the NFPA and Swiss organization OEKO-TEX’s Standard 100 for PPE and Materials for PPE. “The OEKO-TEX certification process tests for the presence of unsafe levels of trace materials, including PFOA.”<sup>78</sup>
- m. 2021 - In a New York Times article, Defendant W.L. Gore maintained that its turnout products were safe.<sup>79</sup>
- n. 2021 – Defendant Lion stated that the representations articulated by its consultant Paul Chrostowski in 2020 (see above), reflect its position: “Dr. Chrostowski’s report says it all for Lion.”<sup>80</sup>
- o. 2021 – Defendants MSA/Globe and W. L. Gore have continued to state that their products have been tested and are safe.<sup>81</sup>
- p. 2022 – Defendant 3M stated that it was not "necessary or appropriate" to declare any PFAS hazardous.<sup>82</sup> It also states on its website that: “The weight of scientific evidence from decades of research does not show that PFOS or PFOA causes harm in people at current or past levels....Decades of research into the health of these workers has not identified negative health outcomes caused by exposure to PFOA or PFOS....It is important to know that while some studies may find links or associations with possible health outcomes, this is not the same as causation. The weight of scientific evidence does not show that PFOS or PFOA

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<sup>77</sup> Paul Chrostowski, *Research and Independent Testing Shows Firefighters’ Turnout Gear Remains Safe Despite Claims* (June 3, 2020), <https://www.firefighternation.com/health-safety/research-and-independent-testing-shows-firefighters-turnout-gear-remains-safe-despite-claims/#gref>.

<sup>78</sup> *Id.*

<sup>79</sup> Hiroko Tabuchi, *Firefighters Battle an Unseen Hazard: Their Gear Could Be Toxic*, New York Times, (January 26, 2021), <https://www.nytimes.com/2021/01/26/climate/pfas-firefighter-safety.html>.

<sup>80</sup> David Ferry, *The Toxic Job of Being A Hero*, Men’s Health, (September 21, 2021), <https://www.menshealth.com/health/a37624731/cancer-firefighter-gear-pfas/>.

<sup>81</sup> Andrew Wallender, *Firefighters Want Halt on Money From Makers of PFAS-Laden Gear*, Bloomberg Law, (January 19, 2021), <https://news.bloomberglaw.com/pfas-project/firefighters-want-halt-on-money-from-makers-of-pfas-laden-gear>.

<sup>82</sup> Jim Spencer, *3M's Support for PFAS Could Cost Taxpayers Billions of Dollars*, Star Tribune (September 11, 2021), <https://www.startribune.com/3m-s-support-for-pfas-could-cost-taxpayers-billion-of-dollars/600096094/>.

causes harm to people at current or historical levels. Although PFAS have been detected in the environment at extremely low levels, their mere presence does not mean they are harmful.... Although it has been widely reported that no causal connection has been identified between exposure to PFOS or PFOA and harm to people's health, there is a great deal of misinformation in the public domain.... The findings of the C-8 science panel are also frequently misunderstood.”<sup>83</sup>

q. 2022 - DuPont and Chemours also continue to assert that there is little scientific evidence to support that PFAS and/or certain PFAS, like fluoropolymers, are harmful to human health.<sup>84</sup>

r. 2022 - DuPont maintains that turnouts keep firefighters safe and “protect against the intrusion of...chemicals.”<sup>85</sup>

150. As frequent sponsors and advertisers in fire service publications, Defendants have been so influential in the industry that fire service leadership have echoed these narratives.

151. For example, in 2017, the International Association of Fire Fighters (“IAFF”), which represents more than 324,000 full-time professional firefighters, issued a statement that both mischaracterized and purported to state that the risks associated with exposure to PFAS and PFAS chemicals and materials in turnouts and Class B foams was minimal to non-existent.<sup>86</sup> The statement even encouraged firefighters to continue to wear turnouts and use legacy Class B foams, creating a

<sup>83</sup> 3M website, *PFAS Stewardship – Health Science* (last visited January 12, 2022), [https://www.3m.com/3M/en\\_US/pfas-stewardship-us/health-science/](https://www.3m.com/3M/en_US/pfas-stewardship-us/health-science/).

<sup>84</sup> DuPont website, *Information on PFAS* (last visited January 12, 2022), <https://www.pp.dupont.com/pfas/what-governmental-agencies-say.html>; Chemours website, *Our Commitment to PFAS Stewardship* (last visited January 12, 2022), <https://www.chemours.com/en/corporate-responsibility/sustainability-safety/our-commitment-to-pfas-stewardship>.

<sup>85</sup> *Id.* at DuPont website (last visited January 12, 2022), <https://www.pp.dupont.com/knowledge/dupont-technology-in-your-turnout-gear.html>.

<sup>86</sup> The IAFF maintained this position until January 2021 when IAFF members demanded that the IAFF leadership hold turnout and Class B foam manufacturers accountable.<sup>86</sup> In July 2021, new IAFF President Edward Kelley made clear that the cancer rates of firefighters is unacceptable and that IAFF is actively working to rid the fire service of the toxic PFAS found in firefighting foams and turnout gear. “The data is becoming clearer. The gear that’s supposed to be protecting us is poisoning us. It defies logic. IAFF, Address by IAFF General President Edward Kelly, Facebook (July 16, 2021), <https://www.facebook.com/IAFFonline/videos/180233720677454>.

1 false sense that these PFAS-containing turnouts and foams were safe. The statement reads, in relevant  
2 part:

3       Importantly, PFOA use has been almost completely phased out in the US.... Fire  
4 fighters may have additional PFOA exposure sources such as older Class B  
5 firefighting foams. If PFOA is a combustion product of PFOA-containing consumer  
6 products made prior to phasing out use of this chemical, fire fighters will be exposed  
7 in fire suppression activities. However, the data are too limited at present to determine  
8 this. PFOA is unlikely to be a component in recently US manufactured turnout gear.  
9 However, if PFOA is a combustion product, it may be present as a contaminant on  
10 turnout gear. PFOA may also be present as a manufactured component of legacy  
11 turnout gear.... The exposure contribution from any such PFOA content is likely to  
12 be minimal since volatilization from the manufactured product would be  
13 required....**At this time, IAFF does not recommend that legacy turnout gear be  
replaced outside of its lifecycle. Fire fighters wishing to minimize PFOA  
exposure should continue to wear their PPE...and regularly decontaminate  
their turnout gear.** IAFF will continue to monitor developments and update this  
fact sheet should new information become available..<sup>87</sup>

14       152. The IAFF maintained the Defendants' position that the turnout gear and Class B foam  
15 was safe until new leadership took over in 2021. Because of these and other false claims and  
16 misrepresentations on the part of Defendants, Plaintiffs did not know and, in the exercise of  
17 reasonable diligence, could not have known that the turnouts and Class B foams they used contained  
18 PFAS or PFAS-containing materials, and caused Plaintiffs to be exposed to PFAS and/or PFAS-  
19 containing materials, causing them to suffer cancers and other serious illnesses as a result of such  
20 exposure.

21       153. Also, in January 2021, Defendants DuPont and Chemours along with Corteva (the  
22 agricultural unit of DuPont that it spun off in 2019) announced a cost-sharing agreement worth \$4  
23 billion to settle lawsuits involving the historic use of PFAS – thereby acknowledging, at long last, the  
24 significant harm their PFAS chemicals have caused to human health and the environment.

25       154. The Firefighter Plaintiffs only learned for the first time that they had significantly  
26

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27 <sup>87</sup> *Statement on PFOA and Turnout Gear*, International Association of Firefighters, (May 2017),  
28 <https://tinyurl.com/y29mfh69>.

1 elevated levels of PFAS in their blood in December 2021, at the earliest, when they received test  
2 results of their blood serum.

3 **F. New Research Indicates That Firefighters are at Significant Risk of Harm From**  
4 **Exposure to PFAS in Turnouts and Class B Foams — But Defendants Continue**  
5 **to Discount or Deny These Risks**

6 155. While historical research (and follow-on litigation) has centered on environmental  
7 impacts and environmental exposures associated with PFAS and PFAS-containing products, recent  
8 studies have focused specifically on the serious health impacts to firefighters stemming from their  
9 occupational exposure to turnouts and Class B foams containing PFAS.

10 156. In October 2019, for example, an expert panel of the International Pollutants  
11 Elimination Network (IPEN), an international non-profit organization comprised of over 600 public  
12 interest non-governmental organizations dedicated to improving global chemical waste policies,  
13 published a scientific paper that, in the words of its authors, “presents unequivocal evidence from  
14 recent studies that firefighters” using Class B foams (primarily AFFF) “have unexpectedly elevated  
15 blood levels” of PFAS, including, specifically, PFHxS and PFOS, with PFHxS (a short-chain, C6  
16 PFAS) being “potentially of greater concern than PFOS given its much longer elimination half-life  
17 in humans.”<sup>88</sup> The paper explains that “[f]irefighters can be significantly exposed to PFHxS and  
18 other PFAS from firefighting foam via various occupational mechanisms including direct exposure  
19 during use as well as exposure from contaminated personal protective equipment (PPE), handling of  
20 contaminated equipment, managing PFAS foam wastes, occupation of contaminated fire stations and  
21 consumption of contaminated local water and produce. Cross-contamination and legacy PFAS  
22 residues from inadequately decontaminated appliances after transitioning to fluorine-free foam can  
23 remain a long-term problem.”<sup>89</sup> The panel concluded that “[o]ngoing exposure to PFHxS, PFOS and  
24 other PFAS amongst firefighters remains a major occupational health issue,” noting that “[b]io-  
25 accumulation and very slow bio-elimination may be very significant influencing factors in PFHxS

26 <sup>88</sup> *Perfluorohexane Sulfonate (PFHxS) – Socio-Economic Impact, Exposure and the Precautionary*  
27 *Principle Report*, IPEN Expert Panel (October 2019),  
28 [https://ipen.org/sites/default/files/documents/pfhxs\\_socio-economic\\_impact\\_final\\_oct.2019.pdf](https://ipen.org/sites/default/files/documents/pfhxs_socio-economic_impact_final_oct.2019.pdf).

<sup>89</sup> *Id.* at p. 25.

exposure” in firefighters.<sup>90</sup> “Of greater concern,” the panel observed, “is that firefighter blood levels for PFOS and PFHxS are many times higher than the median values for the general...population.”<sup>91</sup>

157. In June 2020, scientists at the University of Notre Dame published a ground-breaking study on PFAS in turnout gear, and the exposure risks posed to firefighters that wear, wore, or handle such gear (“Notre Dame Turnout Study”). The Notre Dame Turnout Study analyzed over 30 sets of used and unused (still in their original packaging) turnout gear made by six U.S. manufacturers, including Defendants MSA/Globe, Lion and Honeywell, over several production years, as listed below:<sup>92</sup>

<b>PPE gear manufacturers sampled:</b>	<b># samples</b>
Globe Manufacturing (Pittsfield MA),	11
Lion Group (Dayton OH),	12
Honeywell First Responder (Dayton, OH),	2
Lakeland Fire (Decatur, AL)	2
Quest Fire Apparel (Saratoga Springs, NY)	1
Quaker Safety (Quakertown, PA)	2

**The type and number of turnout gear samples used in this study.**

158. The Notre Dame Turnout Study noted that these manufacturers’ turnout gear (or personal protective equipment-PPE, as it is described in the study) are manufactured “from textiles that are made from fluoropolymers (one form of PFAS) or extensively treated by PFAS in the form of side-chain fluoropolymers.”<sup>93</sup> According to the researchers, “[t]hese PFAS include fluoropolymer materials such as PTFE used as a moisture barrier in the inner layers of turnout gear.”<sup>94</sup> The study found significant levels of PFAS chemicals – including PFOA, PFOS, PFBA, PFPeA, PFHxA, PFHpA, PFNA, PFDA, PFUnA, PFDaA, PFTTrDA, PFTODA, PFBS, PFOSA, N-EtFOSA, MeFOSAA, N-MeFOSE, N-EtFOSE and 6:20FTS – in both new and used turnout gear, and across

<sup>90</sup> *Id.*

<sup>91</sup> *Id.*

<sup>92</sup> *Id.* at fn. 7.

<sup>93</sup> *Id.* at p. A.

<sup>94</sup> *Id.*

layers, portions, and materials in the turnout gear, including in material layers that are not intentionally treated with PFAS by the manufacturer, thereby providing “the first evidence that suggests PFAS appear to migrate from the highly fluorinated layers and collect in the untreated layer of clothing worn against the skin.”<sup>95</sup>

159. These findings suggest that, as the garments are worn, PFAS from the outer shell and the moisture barrier can migrate from the turnouts and contaminate both the firefighter, their apparatus and workplace with PFAS. The analysis also indicated that fluoropolymers from the outer layer decompose into other PFAS, including PFOA.

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Table 2. Quantities of Target PFAS (in ppb) Found in US Turnout Gear by LC–MS/MS Analysis

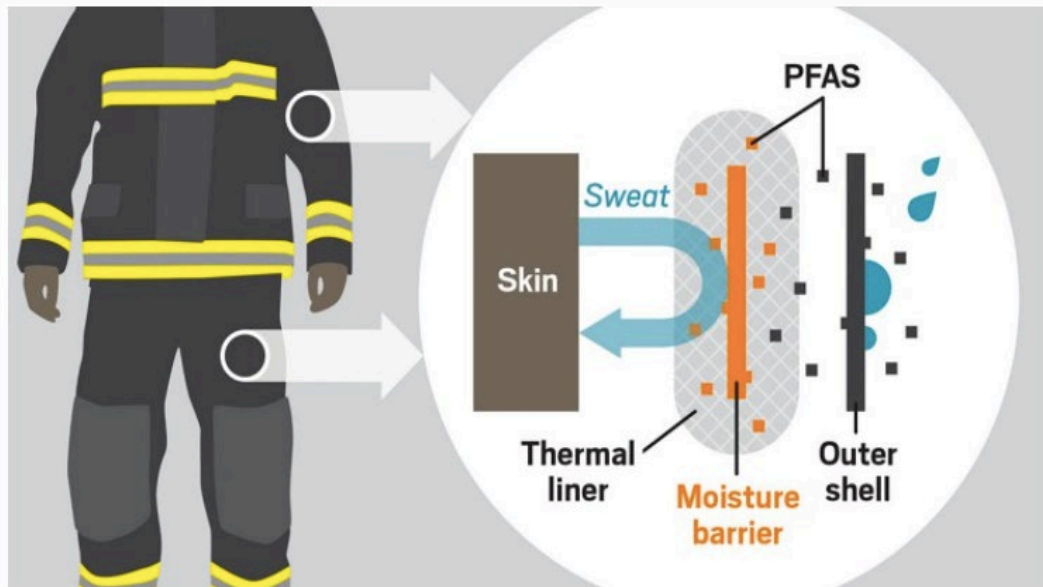
values in ppb	jacket 2008 unused			pants 2014 used			jacket 2008 used	jacket 2017 unused
	thermal liner	moisture barrier	outer shell	thermal liner	moisture barrier	outer shell	moisture barrier	moisture barrier
PFBA	<MDL	12.8	10.6	139	615	21.5	20.5	991
PFPeA	<MDL	12.6	17.8	228	104	164	18.1	2.49
PFHxA	<MDL	30.5	36.9	199	28.6	10.9	35.8	36.9
PFHpA	<MDL	12.4	25.4	105	5.82	2.23	14.3	25.4
PFOA	78	46	182	850	71	97	37	<MDL
PFNA	2.63	<MDL	8.2	25.3	1.95	<MDL	2.76	<MDL
PFDA	2.98	6.51	5.51	133	<MDL	<MDL	23.7	<MDL
PFUnA	<MDL	<MDL	<MDL	7.96	<MDL	<MDL	2.51	<MDL
PFDoA	<MDL	5.01	<MDL	68.6	<MDL	<MDL	25.9	<MDL
PFBS	283	140	142	53 400	47 900	1050	230	90 400
PFOS	<MDL	<MDL	<MDL	7	<MDL	<MDL	2	<MDL
6:2 FTS	<MDL	<MDL	<MDL	25.9	12.9	<MDL	<MDL	<MDL
8:2 FTS	<MDL	<MDL	<MDL	11.1	<MDL	<MDL	<MDL	<MDL

160. “Startlingly,” researchers reported, “garment to hand transfer of total fluorine in the ppm range was also observed when researchers simply manipulated the textiles in [the] laboratory.”<sup>96</sup> The accumulation of PFAS on researchers’ hands strongly suggests that transference of ppm levels of PFAS can occur merely by handling the turnouts and that PFAS exposure pathways include inhalation, ingestion and/or absorption (through dermal contact) – all of which DuPont internally acknowledged as being toxic in 1980. Such exposure pathways are a concern not only for firefighters

<sup>95</sup> *Id.* at p. C.

<sup>96</sup> *Id.*

that rely on turnouts to protect them from heat, fire, water and chemical hazards in the field, but to family members who may be exposed to the PFAS in turnouts as the result of home washing or storage. Lead researcher Graham Peaslee commented that turnouts are “the most highly fluorinated textiles I’ve ever seen”<sup>97</sup> and that the level of PFAS in the turnout gear means that firefighters are “swimming in a sea of [PFAS]. Those numbers for scientists are scarily high...”<sup>98</sup>



Over time, PFAS in a firefighter's turnout gear can migrate from a moisture barrier (orange) into a thermal liner that contacts skin. PFAS can also be shed from an outer shell (black) into the environment.

Credit: Environ. Sci. Technol. Lett.

161. Despite these findings, Defendants have been quick to mischaracterize, dismiss or downplay the significance of the Notre Dame Turnout Study. Defendant MSA/Globe, when contacted about the study and asked whether Globe planned to study this issue and find an alternative to PFAS for turnouts, merely responded thusly: “[P]rotecting (firefighters) is Globe’s business; every

<sup>97</sup> Raleigh McElvery, *Protective Gear Could Expose Firefighters to PFAS*, Chemical and Engineering News (July 1, 2020), <https://cen.acs.org/environment/persistent-pollutants/Protective-gear-expose-firefighters-PFAS/98/i26?fbclid=IwAR3ktyIcasjnxHiv3RNDRJldZmunQleAEoS3Av225uOscj2hFbffVcO3-Go>.

<sup>98</sup> Andrew Wallender, *Firefighters Face New Possible Risk From Toxic PFAS: Their Gear*, Bloomberg Law (June 23, 2020), <https://news.bloomberglaw.com/pfas-project/firefighters-face-new-possible-risk-from-toxic-pfas-their-gear>.

1 piece of our turnout gear meets or exceeds applicable industry standards."<sup>99</sup>

2 162. Defendant Lion's responses have been similar, and have also dismissed or minimized  
3 the significance of the Notre Dame Turnout Study's findings. Lion issued a Customer Safety Alert  
4 for PFOA and Turnout Gear stating: "Your LION turnout gear continues to be safe and ready for  
5 action especially when properly maintained. It is extremely important that firefighters continue to  
6 wear and properly care for their gear to stay safe on the job."<sup>100</sup>

7 163. The Customer Safety Alert goes on to stress that Lion does not use PFOA or PFOS  
8 (two long-chain PFAS chemicals) in its turnouts.<sup>101</sup> It does not, however, address that Lion's  
9 turnouts in fact contain other PFAS chemicals, nor warn firefighters or the public about health harms  
10 associated with exposure to these toxic, bio-accumulating chemicals.

11  
12 **HERE'S ALL YOU NEED TO KNOW**  
13 **ABOUT PFOA AND YOUR TURNOUT GEAR.**

14 **What is PFOA and why are we talking about it?**

15 **Perfluorooctanoic Acid (PFOA) is a chemical that until recently was**  
16 **used in the process to make many different industrial chemicals and**  
17 **products.** The manufacture and use of PFOA was mostly phased out by  
18 major chemical companies by 2010. By 2015, its manufacture was eliminated  
in the United States.

19 In the firefighting protective clothing industry, PFOA was used as a processing  
agent in the manufacture of resins used to make PTFE films – the primary  
component of the moisture barrier used in turnout gear. While most residual  
PFOA was eliminated from the manufacturing process of PTFE, some tiny  
trace amounts remained.

**LION does not use PFOA or PFOS**  
**in our turnout gear or any of our**  
**protective products.**

PFOS has never been a component  
of turnout gear. PFOS health and  
environmental concerns are largely  
related to AFFF foams and are not  
connected to turnout gear.

20 164. As noted above, Defendant Lion's paid consultant, Dr. Paul Chrostowski, also has  
21 taken aim at the Notre Dame Turnout Study and its findings. Refuting a *Fire Rescue* magazine article  
22 about the study,<sup>102</sup> Chrostowski repeated Lion's website statement that "PFOA was never part of the

23  
24 <sup>99</sup> Blair Miller, *Local Firefighters Concerned About Potentially Dangerous Chemicals on Gear*,  
Boston 25 News (February 26, 2019), [https://www.boston25news.com/news/local-firefighters-](https://www.boston25news.com/news/local-firefighters-facing-concerns-over-potentially-dangerous-chemicals-on-gear/925236612/)  
25 [facing-concerns-over-potentially-dangerous-chemicals-on-gear/925236612/](https://www.boston25news.com/news/local-firefighters-facing-concerns-over-potentially-dangerous-chemicals-on-gear/925236612/).

26 <sup>100</sup> Lion Customer Safety Alert – PFOA and Turnout Gear (April 24, 2019),  
[https://cdn2.hubspot.net/hubfs/3475623/LION\\_PFOA\\_factsheet\\_042419.pdf](https://cdn2.hubspot.net/hubfs/3475623/LION_PFOA_factsheet_042419.pdf).

27 <sup>101</sup> *Id.*

28 <sup>102</sup> Larissa Conroy, *What If I Told You That Your Bunker Gear Was Causing Cancer?*, *Fire Rescue*  
(May 28, 2020), [https://www.firefighternation.com/firerescue/what-if-i-told-you-that-your-bunker-](https://www.firefighternation.com/firerescue/what-if-i-told-you-that-your-bunker-gear-was-causing-cancer/#gref)  
[gear-was-causing-cancer/#gref](https://www.firefighternation.com/firerescue/what-if-i-told-you-that-your-bunker-gear-was-causing-cancer/#gref).

gear itself and frequent independent testing has found only trace amounts of it in any of the gear – not nearly enough to cause concern, and in amounts similar to consumer products.”<sup>103</sup> Chrostowski went on to say “[t]he fact is that one may find trace amounts of ‘short-chain’ PFAS such as PFBS and PFHxA in firefighting textiles, but the scientific research shows that these materials are far less toxic than even PFOA and at the tiny trace levels the risk are extremely low based on numerous credible published scientific research papers.”<sup>104</sup> Finally, Chrostowski falsely stated that the link between PFAS exposure and cancer is “extremely weak.”<sup>105</sup>

165. And yet, Lion has admitted publicly that dermal absorption is a pathway of exposure to cancer-causing chemicals for firefighters. In Lion’s *Not in Our House* cancer awareness fact sheet



<sup>103</sup> Paul Chrostowski, Ph.D., QEP, *Research and Independent Testing Shows Firefighters’ Turnout Gear Remains Safe Despite Claims*, Fire Rescue (June 3, 2020), <https://firerescuemagazine.firefighternation.com/2020/06/03/research-and-independent-testing-shows-firefighters-turnout-gear-remains-safe-despite-claims/> - gref.

<sup>104</sup> *Id.*

<sup>105</sup> *Id.*

that currently appears on the company’s website, Lion warns firefighters: “For every 5 degree increase in temperature, skin becomes 400% more absorbent. The hotter you are, the more carcinogens your skin absorbs.”<sup>106</sup> This statistic is alarming given that the core body temperature of firefighters routinely increases during firefighting activities while wearing turnouts which contain known carcinogens.<sup>107</sup>

166. Likewise, Defendant Honeywell has stated: “The skin on the neck is very thin and prone to absorbing carcinogenic particulates.”<sup>108</sup>

167. Another recent Harvard study examining PFAS levels in fire stations dust found that “dust in turnout gear locker areas and adjoining apparatus bays had significantly higher fluorine concentrations compared to living rooms in fire stations,” as well as fluorine concentrations typically found in in Class B foam and/or textiles as opposed to consumer products.<sup>109</sup>



<sup>106</sup> Lion website, [https://cdn2.hubspot.net/hubfs/3475623/NOT%20IN%20OUR%20HOUSE%20Tip%20Sheet\\_Info\\_graphic%20\(02-02-19\).pdf](https://cdn2.hubspot.net/hubfs/3475623/NOT%20IN%20OUR%20HOUSE%20Tip%20Sheet_Info_graphic%20(02-02-19).pdf) (last visited February 13, 2022).

<sup>107</sup> Nancy Espinoza, *Can We Stand the Heat?*, Journal of Emergency Medical Services, (April 30, 2008), <https://www.jems.com/operations/can-we-stand-heat-study-reveal/>; Gavin P. Horn, et al., *Thermal Response to Firefighting Activities in Residential Structure Fires: Impact of Job Assignment and Suppression Tactic*, Ergonomics (July 31, 2017), <https://tinyurl.com/4j2mz7f7>.

<sup>108</sup> Ronnie Wendt, *Innovations in Turnout Gear*, Industrial Fire World (March 17, 2021), <https://www.industrialfireworld.com/598931/innovations-in-turnout-gear>.

<sup>109</sup> *Id.* at fn. 8.

168. For years, the IAFF has held a yearly cancer summit and until 2021, had done little to address the PFAS in turnouts.<sup>110</sup> Defendants, including at least DuPont, Gore, Lion and MSA/Globe, have been regular sponsors of the IAFF Cancer Summit.

169. At this event, as well as in firefighter cancer-related publications, programs and events, Defendants repeatedly used the summit as an opportunity to push the narrative that incidence of cancer among firefighters is attributable either to *other chemicals* encountered in the line of duty, or firefighters' failure to wash their turnouts after every call. Not once have the turnout Defendants admitted that the PFAS materials in their products has been found to be carcinogenic, and that the very equipment that should be protecting firefighters are causing the most harm. Further, Lion's recently launched "Not in Our House" cancer awareness program is sadly ironic in that it encourages *firefighters themselves to make a pledge to protect themselves from carcinogens linked to cancer* ("I will make every effort to protect myself and my team by doing my part to take precautions that will minimize the risk of exposure to carcinogens that may lead to cancer...") *while all the while refusing to take any corporate responsibility* for continually exposing firefighters to carcinogens in their protective gear.<sup>111</sup>

170. Firefighter Plaintiffs deserve more. They are the first to respond to emergencies faced by their community, and never hesitate to help. Whether delivering a baby, responding to a fire,

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<sup>110</sup> As alleged above, in para. 150 and fn. 86, IAFF has only recently begun to take action related to PFAS exposure due to pressure from its firefighter members. At the IAFF Annual Meeting in January 2021, two groundbreaking PFAS-related firefighter safety resolutions passed with the support of 99% of the membership. The resolutions require IAFF to: (1) sponsor independent testing of turnouts for PFAS and PFAS-related hazards, (2) oppose the use of PFAS and PFAS-containing materials in turnouts, (3) require manufacturers to cease using PFAS in their firefighting products (4) identify which manufacturers will not cease using PFAS, (5) issue an advisory to fire departments to stop sending used or old turnouts to communities that are not able to buy new gear and instead provide grants to purchase new gear, and (6) cease accepting financial sponsorships from any PFAS/chemical-related companies unless it is to purchase PFAS-free turnout gear. Andrew Wallender, *PFAS Resolutions Overwhelmingly Approved by Firefighters' Union*, Bloomberg Law (February 1, 2021), <https://news.bloomberglaw.com/daily-labor-report/pfas-resolutions-overwhelmingly-approved-by-firefighters-union>; San Francisco Firefighters Cancer Prevention Foundation, (last visited September 30, 2021), <https://www.sffcpf.org/resolutions-to-protect-members-from-toxic-substances-in-ppe/>.

<sup>111</sup> Rachel Zoch, *Take A Pledge To Stop Cancer At the Door*, Fire Rescue 1 (January 28, 2019), <https://www.firerescue1.com/fire-products/personal-protective-equipment-ppe/articles/take-a-pledge-to-stop-cancer-at-the-door-e8bn7uAbtIXWdQau/>.

1 medical emergency, accident, mass shooting, terrorist attack, natural disaster, or teaching kids about  
2 fire safety, firefighters always put the community first. When a child is drowning in a pool or a  
3 family is caught in a burning house, they do not stop to calculate whether they will benefit by doing  
4 the right thing. They are true public servants. They step in and do what is needed when it is needed  
5 the most. Their health, safety and well-being must be of the highest priority.

6 **G. The Firefighter Plaintiffs Have Significant Levels of PFAS in their Blood**

7 171. After years of Defendants suppressing research showing PFAS to be toxic and  
8 associated with cancer and other serious illnesses, misrepresenting the safety of PFAS and PFAS-  
9 containing turnouts and Class B foam, and attributing the cause of firefighters' cancers and other  
10 serious illnesses to factors other than turnouts and Class B foams (or the PFAS chemicals and  
11 materials in these foams and turnouts), Firefighter Plaintiffs could not know and, in fact, did not know  
12 that significant levels of PFAS was likely to or had bio-accumulated in their blood.

13 172. Prior to filing this complaint, Firefighter Plaintiffs submitted blood serum samples to  
14 public health professionals at the University of California, San Francisco (UCSF) for PFAS level  
15 testing and analysis. The results, which were issued in December of 2021, are startling.

16 173. The testing shows that the Firefighter Plaintiffs have significant levels of PFAS in  
17 their blood for multiple PFAS chemicals

18 174. Importantly, the Firefighter Plaintiffs' blood samples showed significant levels of  
19 PFOA and PFOS – two PFAS chemicals contained in turnouts and Class B foams that are known  
20 carcinogens and have been found to cause cancer and other serious health illnesses in humans.

21 175. Firefighter Plaintiffs only learned for the first time that they were likely to have, and  
22 in fact had, significantly elevated levels of PFAS in their blood in December 2021, at the earliest,  
23 after testing results revealed these facts.

24 176. Based on all of the foregoing, Firefighter Plaintiffs bring this action for damages and  
25 for other appropriate relief sufficient to compensate them for the significant harm Defendants' PFAS  
26 chemicals and PFAS-containing products have caused.

27 **H. It Was Technologically and Economically Feasible for Defendants to Design Safer**  
28 **Firefighting Foams and Turnouts**

177. Defendants have long known that safer, reasonable, alternative designs existed and could be utilized. These designs are and were not only technologically feasible, but also economically. Indeed, given the enormous cost of remediation of the environment and litigation, not to mention the cost of human lives, the safe, feasible alternatives would have cost significantly less.

178. In the early 2000s, 3M, in conjunction with Solberg Scandinavian AS developed Re-Healing Foam (“RF”), a high-performance, AFFF-comparable product that contained no fluorochemicals, and resulted in two patents and three commercial products of PFAS-free firefighting foam. RF met the standard of “ICAO [International Civil Aviation Organization] Level B and matched AFFF in performance including a US MIL-Spec product.”<sup>112</sup> In 2007, Solberg bought 3M’s patent rights to RF and continued to market and sell RF. In 2011, Defendant Amerex acquired Solberg and continued to manufacture, market and sell RF. In 2014, the EPA presented Solberg with the Presidential Green Chemistry Challenge Award for its fluorine-free foams; the award recognizes technologies that prevent pollution and match or improve the performance of existing products.<sup>113</sup> In 2018, Defendant Perimeter Solutions in 2018 acquired Solberg and continued to manufacture, market and sell RF.

179. Also, beginning in the early 2000s, BIOEX launched a highly effective, fluorine-free Class B F3 foam which has been approved and used by international airports, fire departments, oil and gas companies, the marine industry and pharmaceutical and chemical companies around the world.<sup>114</sup>

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<sup>112</sup> *Fluorine Free Firefighting Foams (3F) – Viable Alternatives to Fluorinated Aqueous Film-Forming Foams (AFFF)*, IPEN Expert Panel (September 2018), [https://ipen.org/sites/default/files/documents/IPEN\\_F3\\_Position\\_Paper\\_POPRC-14\\_12September2018d.pdf](https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC-14_12September2018d.pdf); Schaefer, Ted. H. et al., *New Foam Technology, New Found Benefits*, Solberg, IAFPA Sydney 2005 Conference Proceedings (Oct. 5-7, 2005), <https://www.solbergfoam.com/getattachment/c5bef149-b850-48df-81a8-19b977c6daed/New-Foam-Technology,-New-Found-Results.aspx>;

<sup>113</sup> Marc S. Reisch, *What Is the Price of Fire Safety? As Lawsuits Pile Up and Government Pressure Rises, Firefighting-Foam Makers Reconsider the Environmental Cost of Fluorosurfactants*, Chemical & Engineering News (January 14, 2019), <https://cen.acs.org/business/specialty-chemicals/price-fire-safety/97/i2>.

<sup>114</sup> *Fluorine Free Firefighting Foam (FFF) – Firefighting Foam Concentrates*, BIOEX website (last (footnote continued)

180. However, lobbyists and companies invested in maintaining profits on fluorinated Class B foam not only continued to represent that PFAS-containing foam was safe, but also intentionally maligned the fluorine free foams, falsely asserting that these foams were less effective and more expensive.<sup>115</sup> As noted by IPEN:

Over the years since the serious introduction on the market of Class B fluorine-free F3 foams suitable for hydrocarbon and polar solvent fires: there have been many attempts by the fluorochemical side of the industry and their lobbyist trade associations to undermine and downplay the operational performance of Class B fluorine-free foams whilst minimizing the environmental issues associated with fluorinated products. This has included publishing in the technical trade literature spurious performance tests carried out by non-independent or certified bodies funded by competitors to F3 producing companies, as well as continually perpetrating unsupported myths. It is these myths in particular that must be controverted for what they are: marketing hype, misrepresentation of test conditions, frank untruths or only partial truths, criticism of a competitor's product, and an exhibition of vested interests.<sup>116</sup>

181. In 2011, the Fire Fighting Foam Coalition, which includes Defendants Tyco, DuPont, Dynax, Kidde, and Buckeye, misrepresented a U.S. Navy report comparing Solberg's fluorine-free RF with Defendant National Foam's 6-Em AFFF and Defendant Buckeye's FC-3MS AFFF, asserting Solberg's RF was less effective. In fact, though Solberg's RF was not made per military specifications as it did not include fluorine, the U.S. Navy Report found:

For iso-octane, the non-fluorinated foam had shorter extinguishment times than the two

visited December 13, 2021), <https://www.bio-ex.com/en/our-products/compositions/fluorine-free-foam/>; "Major international hubs such as Dubai, Dortmund, Stuttgart, London Heathrow, Manchester, Copenhagen, and Auckland. All of the 27 major airports in Australia have transitioned to F3 foams, with airports in Europe such as Billund, Guernsey, Bristol, Blackpool, Koln Bonn also using F3 [fluorine-free] foams. Private sector companies using F3 foams include: BP, ExxonMobil, Total, Gazprom, Statoil, BHP Billiton, Bayern Oil, 3M, BASF, Chemours, AkzoNobel, Stena Line, Pfizer, Lilly, Weifa, JO Tankers, and ODFJEL. In the oil and gas sector F3 foams are being extensively, with Statoil in Norway having transitioned to F3 foams throughout all of its operations. Some military users including the Danish and Norwegian Armed forces have moved to F3 foams, with the Royal Danish Airforce transitioning to F3 foams several years ago." *Fluorine Free Firefighting Foams (3F) – Viable Alternatives to Fluorinated Aqueous Film-Forming Foams (AFFF)*, IPEN Expert Panel, pg. 48 (September 2018), [https://ipen.org/sites/default/files/documents/IPEN\\_F3\\_Position\\_Paper\\_POPRC-14\\_12September2018d.pdf](https://ipen.org/sites/default/files/documents/IPEN_F3_Position_Paper_POPRC-14_12September2018d.pdf)

<sup>115</sup> *Id.* at 20.

<sup>116</sup> *Id.* at 22.

1 AFFFs and was the only foam to achieve an extinguishment time under 30 seconds....The  
2 non-fluorinated foam had substantially better performance on iso-octane than on any of the  
3 other fuels.

4 Conclusions: For the AFFF foams which were intended to work via formation of an aqueous  
5 film, fire extinction times were lengthened considerably in cases where film formation was  
6 made difficult by the low surface tension of the fuel. ***For the non-filming fluorine-free foam,  
however, no such performance decrement was observed, and the fire extinction times on  
the lowest surface tension fuel were lower than for fuels with higher surface tensions, and  
within the 30 second time limit specified (on gasoline) by MIL-F-24385F.***<sup>117</sup> (emphasis  
added)

7 182. Further, the study found that AFFF foams had 25% drain times (between 4-6 minutes)  
8 whereas the fluorine-free RF's drain time was 12 minutes. This slower drain time leads to greater  
9 burn back resistance and greater safety for firefighters.

10 183. The technology to develop safer, effective and economical fluorine-free Class B foam  
11 is and has been available for, at least, over 20 years. In fact, many firefighting foam manufacturers  
12 and distributors companies manufacture, market and/or sell fluorine-free firefighting foams,  
13 including Defendants Tyco, Perimeter Solutions, Chemguard, Johnson Controls, and National Foam.

14 184. EUROFEU, an umbrella organization representing fire protection trade associations  
15 and companies including Defendant Tyco, even stated in 2019: "We believe that F3s [fluorine-free  
16 foams] are very suitable for a growing number of applications such as municipal firefighting, training,  
17 some testing and as foam agents in first responding fire trucks."<sup>118</sup>

18 185. LAST FIRE, a consortium of international oil companies developing best industry  
19 practice in storage tank Fire Hazard Management including Shell Oil, Chevron, BP, Exxon and  
20 Defendant Perimeter Solutions, concluded after conducting 200 tests that: "Fluorine free foams can  
21 provide equivalent performance to C6 foams [AFFF] and provide appropriate performance for  
22  
23

24 <sup>117</sup> Solberg Foam website, *Re-Healing Foam Fire Performance*, Technical Bulletin, #1009, (last  
25 visited December 13, 2021), <https://www.solbergfoam.com/getattachment/f8574423-9518-4888-a054-c170c0d9a234/RE-HEALING-Foam-Fire-Performance.aspx>.

26 <sup>118</sup> *The Use of PFAS and Fluorine-Free Alternatives in Fire-Fighting Foams*, European Commission  
27 DG Environment and European Chemicals Agency (ECHA), Final Report, June 2020, p. 273,  
28 [https://echa.europa.eu/documents/10162/28801697/pfas\\_flourine-free\\_alternatives\\_fire\\_fighting\\_en.pdf/d5b24e2a-d027-0168-cdd8-f723c675fa98](https://echa.europa.eu/documents/10162/28801697/pfas_flourine-free_alternatives_fire_fighting_en.pdf/d5b24e2a-d027-0168-cdd8-f723c675fa98)

1 hydrocarbon [fires].”<sup>119</sup>

2 186. Safe fluorine-free turnout gear was and is also technologically and economically  
3 feasible.

4 187. Fire-Dex manufactures, markets and sells an entire line of PFAS-free turnouts, as well  
5 non-fluorinated fabrics from Safety Components with a PFAS-free water-repellent.<sup>120</sup> “Made with  
6 the same fabric as our traditional TECGEN71 outer shell, this material is designed to reduce heat  
7 stress while offering the same performance levels in TPP, breathability, and overall reduction of  
8 composite weight.”<sup>121</sup> Further, because of the increased breathability and thermal protection, the  
9 PFAS-free gear is the only outer shell that can currently be paired with the lightest and thinnest  
10 thermal liners and moisture barriers.<sup>122</sup> This, according to Fire-Dex, significantly reduces heat stress  
11 and cardiac failure for firefighters while also reducing the risk of cancer and other diseases by  
12 eliminating PFAS exposure through turnout gear.

13 188. Defendants MSA/Globe, Honeywell, Tencate, and Gore have developed,  
14 manufactured, marketed and/or sold PFAS-free waterproofing technology, PFAS-free outer shells in  
15 turnout gear and/or durable PFAS-free fabrics.<sup>123</sup>

16 189. Defendant Honeywell even admitted that these PFAS-free alternatives are safe,  
17 feasible and economical: “Any minor tradeoffs with PFAS-free fabrics are outweighed by worker

18 \_\_\_\_\_  
19 <sup>119</sup> *Id.* at pp. 314-315. Hydrocarbon fires are flammable gas or liquid fires that may involve gas, oil,  
20 kerosene, ethanol, propane, acetylene, hydrogen, and methane, to name a few.

21 <sup>120</sup> *Fire-Dex Launches Non-Fluorinated PPE Fabrics*, Firehouse.com (February 17, 2021),  
22 <https://www.firehouse.com/safety-health/ppe/turnout-gear/press-release/21210722/firedex-firedex-launches-nonfluorinated-ppe-fabrics>.

23 <sup>121</sup> *Alternative PPE*, Fire-Dex website, (last visited December 14, 2021),  
24 <https://www.firedex.com/catalog/tecgen51-fatigues/#materials>.

25 <sup>122</sup> *TecGen71 Outer Shell*, Fire-Dex website, (last visited December 14,  
26 2021), <https://www.firedex.com/tecgen71/>.

27 <sup>123</sup> *FreeFAS Durable Water Repellent (DWR) Coating*, MSA/Globe website (last visited December  
28 14, 2021), <https://globe.msasafety.com/newoutershells>; *Id.* at fn. 106, Wendt, *Innovations in Turnout Gear*, Industrial Fire World (March 17, 2021), <https://www.industrialfireworld.com/598931/innovations-in-turnout-gear>; WL Gore to Release PFAS-free Waterproof Material for Apparel, Chemical Watch (October 4, 2021), <https://chemicalwatch.com/346695/wl-gore-to-release-pfas-free-waterproof-material-for-apparel>.

1 safety. And the protection level is unchanged. PFAS-free gear offers the same thermal protection and  
 2 moves the same way. The color fastness and wear remain the same.”<sup>124</sup>

3 190. While the technology to develop fluorine-free turnout gear has been available for  
 4 years, the NFPA turnouts standards-setting technical committee continues to adhere to certain  
 5 guidelines for turnout gear which require PFAS – knowingly putting firefighters at risk for exposure  
 6 to PFAS. This committee is comprised of industry consultants, textile and gear manufacturers,  
 7 including Defendants MSA/Globe, Lion, Tyco, and Honeywell.<sup>125</sup>

8 191. The economic and technological feasibility of fluorine-free foams and turnout gear is  
 9 well-established, and based on technology that has been available for years. The alternative designs  
 10 detailed above are far safer for firefighters and eliminate the serious health risks that result from PFAS  
 11 exposure.

12 192. The only barrier to producing safer alternatives to PFAS-containing foams and turnout  
 13 gear has been Defendants’ opposition. Their continued manufacturing, marketing, selling and/or  
 14 distributing PFAS-containing foams and turnout gear has exposed firefighters to toxic PFAS  
 15 chemicals. These defective designs are and/or have been a substantial factor in causing Firefighter  
 16 Plaintiffs’ injuries.

17 193. Based on all of the foregoing, Firefighter Plaintiffs bring this action for damages and  
 18 for other appropriate relief sufficient to compensate them for the significant harm Defendants’ PFAS  
 19 chemicals and PFAS-containing products have caused.

#### 20 **EQUITABLE TOLLING OF APPLICABLE STATUE OF LIMITATIONS**

21 194. Plaintiffs incorporate by reference all prior paragraphs of this complaint as though  
 22 fully set forth herein.

23  
 24 \_\_\_\_\_  
 25 <sup>124</sup> *Id.* at fn. 108.

26 <sup>125</sup> NFPA 1971/1851 Technical Committee Meeting Minutes (March 31, 2020),  
 27 [https://www.nfpa.org/assets/files/AboutTheCodes/1971/1971\\_F2022\\_FAE\\_SPF\\_Pre-](https://www.nfpa.org/assets/files/AboutTheCodes/1971/1971_F2022_FAE_SPF_Pre-FD_MeetingMinutes_3_20.pdf)  
 28 [FD\\_MeetingMinutes\\_3\\_20.pdf](https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf_pre-rocmeetingminutes_01-12%20(2).pdf); NFPA 1971/1851 Technical Committee Meeting Minutes (January  
 11-12, 2012), [https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf\\_pre-](https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf_pre-rocmeetingminutes_01-12%20(2).pdf)  
[rocmeetingminutes\\_01-12%20\(2\).pdf](https://www.nfpa.org/assets/files/aboutthecodes/1851/fae-spf_pre-rocmeetingminutes_01-12%20(2).pdf)

**A. To the Extent Applicable, the Statute of Limitations Should Be Equitably Tolled Due to Defendants' Fraudulent Concealment and Misrepresentations**

195. Defendants had control over, and superior, if not exclusive, knowledge of the hazardous toxicity, persistence and bioaccumulation of PFAS and PFAS-containing materials for decades.

196. Since at least the 1960s, and as late as the early 1990s, Defendants have known, or should have known, of the hazardous toxicity, persistence and bioaccumulation of PFAS and PFAS-containing materials, including Class B foam and/or turnouts, when internal study after internal study showed not only unacceptable levels of toxicity and bioaccumulation in human blood, but links to increased incidence of liver damage, tumors, cancer and birth defects. Such information was material to Firefighter Plaintiffs at all relevant times

197. Nonetheless, as detailed above, Defendants intentionally concealed these materials facts and findings from their own internal research from firefighters, including Firefighter Plaintiffs, fire departments, fire service media, fire organizations, the EPA and the public.

198. Defendants have also continuously misrepresented the safety of PFAS and PFAS-containing materials for the past sixty years to firefighters, including Firefighter Plaintiffs, fire departments, fire service media, fire organizations, the EPA and the public. Indeed, to this day, Defendants continue to assert in their public statements, on their websites, and on the product warning labels and material safety data sheets statements that accompany their PFAS-containing products, including Class B foam and turnouts, are safe and non-toxic.

199. When concerns have been raised in the scientific and fire service communities about the safety of PFAS and PFAS-containing turnouts and/or Class B foam, Defendants have uniformly dismissed these concerns as scientifically unfounded and maintained that PFAS and protective equipment containing PFAS are safe and non-toxic.

200. In the face of challenges from the fire service communities as to the safety of PFAS-containing protective equipment, Defendants have repeatedly asserted that because the protective equipment meets the NFPA technical standards, there is no basis to challenge the safety of the turnouts and/ or Class B foam. The Defendants, however, did not also disclose that they have actively participated in establishing the NFPA technical standards and withheld material information from the

1 NFPA when those standards were set.

2 201. Defendants knowingly, actively, and affirmatively concealed the facts alleged herein  
3 and misrepresented the safety of PFAS or PFAS-containing turnouts and/or Class B foam to  
4 Firefighter Plaintiffs.

5 202. Firefighter Plaintiffs reasonably relied upon, and were deceived by Defendants'  
6 representations that their PFAS or PFAS-containing turnouts and/or Class B foam were safe and non-  
7 toxic. Firefighter Plaintiffs were unaware that the Class B foam and/or turnouts contained toxic PFAS  
8 chemicals.

9 203. As a result of Defendants' fraudulent concealment and misrepresentations and despite  
10 Firefighter Plaintiffs' due diligence, Firefighter Plaintiffs did not and could not have discovered the  
11 operative facts - that PFAS were in their turnouts and/or Class B foam and exposed them to toxic  
12 levels of PFAS - to form the basis for a cause of action against Defendants within the statute of  
13 limitations period.

14 204. At all times, Defendants are and were under a continuous duty to disclose to  
15 Firefighter Plaintiffs the hazardous toxicity, persistence, and bioaccumulation associated with the use  
16 of PFAS or PFAS-containing materials in turnouts and Class B foam.

17 205. For these reasons, any and all applicable statutes of limitations have been tolled as a  
18 consequence Defendants' ongoing knowledge, active fraudulent concealment, and misrepresentation  
19 of material facts alleged herein.

20  
21 **B. Defendants Should Be Estopped From Using Statute of Limitations as an Affirmative  
Defense Due to Their Fraudulent Concealment and Misrepresentations**

22 206. To the extent that certain Plaintiffs did know sufficient facts to file a cause of action  
23 against Defendants during any applicable statute of limitations period, Defendants should be estopped  
24 from invoking the statute of limitations as an affirmative defense as they have continually,  
25 intentionally and knowingly fraudulently concealed and misrepresented material facts about the  
26 hazardous toxicity, persistence and bioaccumulation of PFAS and PFAS-containing materials,  
27 including Class B foam and/or turnouts, which caused certain Plaintiffs to delay in filing a claim  
28 against Defendants.

1           207. Defendants had control over, and superior, if not exclusive, knowledge of the  
2 hazardous toxicity, persistence and bioaccumulation of PFAS and PFAS-containing materials for  
3 decades, and they fraudulently and intentionally concealed these facts from Firefighter Plaintiffs for  
4 60 years. To this day, they actively and falsely maintain that PFAS and PFAS-containing products  
5 are not toxic, persistent and/or bioaccumulative.

6           208. Defendants have repeatedly and falsely represented to firefighters, including certain  
7 Plaintiffs, that any increase in cancer rate among firefighters is from exposure to other chemicals  
8 during fires - not from exposure to PFAS or PFAS-containing materials found in turnouts and/or  
9 Class B foam that firefighters use daily.

10           209. While Defendants also repeatedly advised firefighters, including certain Plaintiffs,  
11 fire departments, the fire service media and fire organizations that the best solution for reducing  
12 cancer incidence was to decontaminate firefighters' turnout gear with industrial-grade washing  
13 machines after responding to a fire and/or using Class B foam, Defendants knowingly and  
14 intentionally concealed from certain Plaintiffs and fire departments that repeated washing of turnout  
15 gear would cause the turnouts to degrade more quickly, causing increased exposure to toxic-PFAS  
16 through inhalation, ingestion and/or dermal exposure.

17           210. When concerns have been raised in the scientific and fire service communities about  
18 the safety of PFAS and PFAS-containing turnouts and/or Class B foam, Defendants have uniformly  
19 dismissed these concerns as scientifically unfounded and maintained that PFAS and protective  
20 equipment containing PFAS are safe and non-toxic.

21           211. In the face of challenges from the fire service communities as to the safety of PFAS-  
22 containing protective equipment, Defendants have repeatedly asserted that because the protective  
23 equipment meets the NFPA technical standards, there is no basis to challenge the safety of the  
24 turnouts and/ or Class B foam. The Defendants, however, did not also disclose that they have actively  
25 participated in establishing the NFPA technical standards and withheld material information from the  
26 NFPA when those standards were set.

27           212. As Defendants had control over and superior knowledge of the serious risks of PFAS,  
28 certain Plaintiffs reasonably relied upon Defendants' knowing and affirmative misrepresentations,

1 and/or active concealment, of material facts regarding the hazardous toxicity, persistence and  
2 bioaccumulation of PFAS and PFAS-containing materials, including Class B foam and/or turnouts,  
3 which caused certain Plaintiffs to delay in filing a claim against Defendants.

4 213. Based on the foregoing, Defendants are estopped from relying on any and all  
5 applicable statutes of limitations in defense of this action.

6  
7 **C. To the Extent Applicable, the Statute of Limitations Should Be Tolled**

8 214. For over fifty years and to this day, Defendants have fraudulently concealed and  
9 actively misrepresented the hazardous toxicity, persistence, and bioaccumulation associated with the  
10 use of PFAS or PFAS-containing materials in Class B foam and/or turnouts to firefighters, including  
11 certain Firefighter Plaintiffs, fire departments, the fire service media and fire organizations in an effort  
12 to mask the very serious health and environmental consequences of exposure to PFAS.

13 215. Because of Defendants' active and ongoing concealment of the true nature of the  
14 hazardous toxicity, persistence, and bioaccumulation associated with the use of PFAS or PFAS-  
15 containing materials in Class B foam and/or turnouts, and their prior knowledge of it, Plaintiffs could  
16 not have reasonably discovered the causes of action alleged herein.

17 216. Further, it was nearly impossible for Firefighter Plaintiffs to determine whether they  
18 had PFAS in their blood and a basis for a claim against Defendants. Obtaining a PFAS analysis of a  
19 blood sample is not readily available to the public, nor is it a test that a medical doctor or regular  
20 hospital lab can order much less analyze.

21 217. In addition to the obstacles of getting PFAS blood serum levels tested, certain  
22 Firefighter Plaintiffs had no realistic ability to discern or suspect that the hazardous toxicity,  
23 persistence, and bioaccumulation associated with the use of PFAS or PFAS-containing materials in  
24 Class B foam and/or turnouts were a substantial cause of their injuries until—at the earliest—the  
25 Firefighter Plaintiffs received their test results revealing that they had significantly elevated levels of  
26 PFAS in December 2021.

27 218. The causes of action alleged herein thus did not accrue until certain Firefighter  
28 Plaintiffs discovered the hazardous toxicity, persistence, and bioaccumulation associated with the use

1 of PFAS or PFAS-containing materials in Class B foam and/or turnouts, and that they had elevated  
2 levels of PFAS in their bodies and blood.

3 219. Accordingly, Defendants are precluded by the Discovery Rule, which provides that  
4 the accrual of certain causes of action, such as in product liability cases, is postponed until plaintiff  
5 discovers or has reason to discover the cause of action, from relying upon any and all applicable  
6 statutes of limitations.

### 7 **FIRST CAUSE OF ACTION**

#### 8 **STRICT LIABILITY - DESIGN DEFECT**

9 220. This cause of action is asserted against all Defendants on behalf of all Plaintiffs.

10 221. Plaintiffs incorporate by reference all prior paragraphs of this complaint, as though  
11 fully set forth herein.

12 222. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities  
13 they have acquired, have engaged in the business of manufacturing, designing, selling, distributing,  
14 supplying, testing, inspecting, labeling, promoting, and/or advertising of turnouts and/or Class B  
15 foam and through that conduct have knowingly placed PFAS-containing products into the stream of  
16 commerce with full knowledge that they were sold to fire departments, or to companies that sold  
17 turnouts and/or Class B foam to fire departments for use by firefighters such as Plaintiffs, who are  
18 and/or were exposed to PFAS through ordinary and foreseeable uses for the purpose of firefighting  
19 activities and training.

20 223. Defendants intended that the PFAS chemicals and/or PFAS-containing turnouts  
21 and/or Class B foam that they are and/or were manufacturing, designing, selling, distributing,  
22 supplying, testing, inspecting, labeling, promoting, and/or advertising would be used by firefighters,  
23 including Plaintiffs, without any substantial change in the condition of the products from when it was  
24 initially manufactured, sold, distributed, and marketed by Defendants.

25 224. Turnouts and/or Class B foam are and/or were defective and unreasonably dangerous  
26 because they contain toxic PFAS chemicals which, as detailed above, are highly mobile, persistent  
27 known carcinogens and immune system disruptors that pose a substantial likelihood of harm to  
28 firefighters even when used as directed by the manufacturer for its intended purpose of firefighting

1 activities, including training, extinguishment, ventilation, search-and-rescue, salvage, containment,  
2 and overhaul.

3 225. PFAS and/or PFAS-containing turnouts and/or Class B foam designed, manufactured,  
4 marketed, tested, inspected, labeled, advertised, promoted, sold and/or distributed by the Defendants  
5 are and/or were unreasonably dangerous and defective in design or formulation because, at the time  
6 in which the products left the hands of the manufacturer or distributors, the utility and benefit of these  
7 products did not outweigh the risks inherent in the design or formulation of the PFAS-containing  
8 turnouts and/or Class B foam.

9 226. Firefighters wear their turnouts on every shift and use Class B foam regularly in  
10 training and firefighting activities. Defendants have known for decades that exposure to PFAS or  
11 PFAS-containing materials is toxic to humans and animals, and results in significant – often  
12 catastrophic – health effects, including cancer and birth defects. This risk is heightened for people  
13 with consistent exposure to these chemicals which have a long half-life and impact the body on a  
14 cellular level. The risk of such serious health effects is and/or was not outweighed by the utility and  
15 benefit of PFAS or PFAS-containing, particularly in light of the availability of PFAS-free turnout  
16 gear and firefighting foam.

17 227. The turnouts and/or Class B foam designed, manufactured, marketed, tested,  
18 inspected, labeled, advertised, promoted, sold, and/or distributed by the Defendants were dangerous  
19 and defective in design or formulation because, when the PFAS-containing products left the hands of  
20 the manufacturer or distributors, these products posed significant health risks and were unreasonably  
21 dangerous in normal use.

22 228. The PFAS-containing turnouts and/or Class B foam did not perform as safely as an  
23 ordinary firefighter would have expected it to perform when used or misused in an intended or  
24 reasonably foreseeable way.

25 229. Further, knowing of the dangerous and hazardous properties of PFAS and/or PFAS-  
26 containing turnouts and/or Class B foam, Defendants could have manufactured, marketed,  
27 distributed, and/or sold alternative designs or formulations of fluorine-free chemicals, fluorine-free  
28 turnouts and/or Class B foam.

1           230. These alternative designs and/or formulations were already practical, similar in cost,  
2 technologically feasible and/or available.

3           231. Indeed, in the 1990s, DuPont had a viable replacement for PFOA that was less toxic,  
4 less-bio-accumulative, but chose not pursue it. In the 2000s, multiple companies developed safer,  
5 effective fluorine-free foams. PFAS-free turnout gear is also available and feasible, and would be  
6 more widely available if its development, manufacture and sale were not hindered by Defendants'  
7 actions and misrepresentations.

8           232. The use of these alternative designs would have reduced or prevented the substantial  
9 likelihood of harm to Plaintiffs that was caused by the Defendants' design, manufacture, testing,  
10 inspecting, labeling, marketing, advertising, promotion, sale and/or distribution of PFAS and/or  
11 PFAS-containing turnouts and/or Class B foam.

12           233. Additionally, the turnouts and/or Class B foam that were designed, manufactured,  
13 marketed, tested, inspected, labeled, advertised, marketed, promoted, sold, and/or distributed by the  
14 Defendants contained PFAS or PFAS-containing materials that were so toxic and unreasonably  
15 dangerous to human health and the environment, with the toxic chemicals being highly mobile and  
16 persistent, that the act of designing, formulating, manufacturing, testing, labeling, marketing,  
17 distributing, and/or selling these products was unreasonably dangerous and the foreseeable risks of  
18 causing serious health consequences, such as cancer, exceeded the benefits associated with the design  
19 or formulation of PFAS-containing turnouts and/or Class B foam.

20           234. Defendants' design of toxic PFAS chemicals and/or PFAS-containing turnout gear  
21 and/or Class B foam was unreasonably dangerous and substantial factor in causing Plaintiffs' injuries.

22           235. As a result of Defendants' defective design, Defendants are strictly liable in damages  
23 to Plaintiffs.

24           236. Defendants acted with willful or conscious disregard for the rights, health, and safety  
25 of Plaintiffs, as described herein, thereby entitling Plaintiffs to an award of punitive damages.

26  
27                                   **SECOND CAUSE OF ACTION**

28                                   **STRICT LIABILITY – FAILURE TO WARN**

1           237. This cause of action is asserted against all Defendants on behalf of all Plaintiffs.

2           238. Plaintiffs incorporate by reference all prior paragraphs of this complaint, as though  
3 fully set forth herein.

4           239. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities  
5 they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing,  
6 labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-  
7 containing materials and, through that conduct, have knowingly placed PFAS-containing products  
8 into the stream of commerce with full knowledge that they were sold to fire departments and/or to  
9 companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as  
10 Plaintiffs.

11           240. Defendants' turnouts and/or Class B foam containing PFAS or PFAS-containing  
12 materials were unreasonably dangerous for their reasonably anticipated use because exposure to  
13 PFAS poses a significant threat to human health.

14           241. Defendants knew or should have reasonably known in light of prevailing scientific  
15 and industry knowledge that the manner in which they were designing, manufacturing, testing,  
16 inspecting, labeling, marketing, distributing, and/or selling turnouts and/or Class B foam containing  
17 PFAS was hazardous to human health, and that firefighters, like Plaintiffs, would be exposed to PFAS  
18 through ordinary and foreseeable uses of turnouts and/or Class B foam in the course of engaging in  
19 firefighting activities and training.

20           242. Defendants had a duty to warn against such latent dangers resulting from foreseeable  
21 uses of its product of which it knew or should have known.

22           243. At the time of manufacture, distribution, promotion, labeling, distribution, and/or sale,  
23 Defendants could have provided warnings or instructions regarding the full and complete risks of  
24 turnouts and/or Class B foam containing PFAS or PFAS-containing materials.

25           244. Defendants, however, breached their duty and failed to provide adequate warnings as  
26 to the potential harm that might result from exposure to PFAS or PFAS-containing products that  
27 would lead an ordinary reasonable user, such as Plaintiffs, to contemplate the danger to human health  
28 posed by such products.

1           245. In fact, Defendants failed to issue any warnings, instructions, recalls and/or advice as  
2 to the danger of exposure to the toxic PFAS-containing turnouts and/or Class B foam, and the  
3 potential for such exposure to cause serious physical injury and disease.

4           246. Defendants also did not instruct Plaintiffs on the proper steps they could take to reduce  
5 the harmful effects of previous exposure, the need to have periodic medical examinations including  
6 the giving of histories which revealed the details of the previous exposure, and the need to have  
7 immediate and vigorous medical treatment for all related adverse health effects.

8           247. Plaintiffs did not and could not have known that the use of turnouts and/or Class B  
9 foam in the ordinary course of performing their duties as firefighters could be hazardous to their  
10 health, bioaccumulate in the blood, and cause serious health effects, including cancer. Had  
11 Defendants adequately warned Plaintiffs, they would have heeded such warnings.

12           248. The burden on Defendants to guard against this foreseeable harm to Plaintiffs was  
13 minimal, and merely required that they provide adequate instructions, proper labeling, and sufficient  
14 warnings about their PFAS-containing products.

15           249. Defendants were in the best position to provide adequate instructions, proper labeling,  
16 and sufficient warnings about the PFAS-containing, turnouts and/or Class B foam and to take steps  
17 to eliminate, correct, or remedy any exposure or contamination they caused.

18           250. As a direct and proximate result of Defendants' failure to provide adequate and  
19 sufficient warnings, Plaintiffs suffered the injuries and damages described herein for which  
20 Defendants are strictly liable.

21           251. Defendants acted with willful or conscious disregard for the rights, health, and safety  
22 of Plaintiffs, as described herein, thereby entitling Plaintiffs to an award of punitive damages.

23                           **THIRD CAUSE OF ACTION**

24                           **NEGLIGENCE – DESIGN DEFECT**

25           252. This cause of action is asserted against all Defendants on behalf of all Plaintiffs.

26           253. Plaintiffs incorporate by reference all prior paragraphs of this complaint, as though  
27 fully set forth herein.

28           254. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities

1 they have acquired, have engaged in the business of manufacturing, designing, selling, distributing,  
2 supplying, testing, labeling, promoting, and/or advertising of turnouts and/or Class B foam and  
3 through that conduct have knowingly placed PFAS-containing products into the stream of commerce  
4 with full knowledge that they were sold to fire departments, or to companies that sold turnouts and/or  
5 Class B foam to fire departments for use by firefighters such as Plaintiffs.

6 255. Defendants intended that the PFAS chemicals and/or PFAS-containing turnouts  
7 and/or Class B foam that they are and/or were manufacturing, designing, selling, distributing,  
8 supplying, testing, labeling, promoting, and/or advertising would be used by firefighters, including  
9 Plaintiffs, without any substantial change in the condition of the products from when they were  
10 initially manufactured, sold, distributed, and/or marketed by Defendants.

11 256. Defendants also knew or should have known in light of prevailing scientific and  
12 industry knowledge that Plaintiffs would be exposed to PFAS through ordinary and foreseeable uses  
13 of these products for the purpose of firefighting activities and training.

14 257. Defendants had a duty to not endanger the health and safety of Plaintiffs who were  
15 foreseeable users of the PFAS-containing turnouts and/or Class B foam that Defendants are and/or  
16 were manufacturing, designing, selling, distributing, supplying, testing, labeling, promoting, and/or  
17 advertising as firefighter protective safety equipment.

18 258. Defendants' duty required that they exercise reasonable care in the manufacturing,  
19 designing, selling, distributing, supplying, testing, labeling, promoting, and/or advertising of turnouts  
20 and/or Class B foam.

21 259. Defendants breached their duty of reasonable care by negligently manufacturing,  
22 designing, selling, distributing, supplying, testing, inspecting, labeling, promoting, and/or advertising  
23 of PFAS-containing turnouts and/or Class B foam which were defective and unreasonably dangerous.  
24 The turnouts and/or Class B foam contained toxic PFAS chemicals which, as detailed above, are  
25 highly mobile, persistent known carcinogens, and immune system disruptors that pose a substantial  
26 likelihood of harm to firefighters even when used as directed by the manufacturer for its intended  
27 purpose of firefighting activities.

28 260. PFAS and/or PFAS-containing turnouts and/or Class B foam designed, manufactured,

1 marketed, tested, advertised, promoted, sold and distributed by the Defendants are and/or were  
2 unreasonably dangerous and defective in design or formulation because, at the time in which the  
3 products left the hands of the manufacturer or distributors, the utility and benefit of these products  
4 did not outweigh the risks inherent in the design or formulation of the PFAS-containing turnouts  
5 and/or Class B foam.

6 261. Firefighters wear their turnouts on every shift and use Class B foam regularly in  
7 training and firefighting activities. Defendants have known for decades that exposure to PFAS or  
8 PFAS-containing materials is toxic to humans and animals, and results in significant – often  
9 catastrophic – health effects, including cancer and birth defects. This risk is heightened for people,  
10 like Plaintiffs, with consistent exposure to these chemicals which have a long half-life and impact the  
11 body on a cellular level. The risk of such serious health effects is and/or was not outweighed by the  
12 utility and benefit of PFAS or PFAS-containing, particularly in light of the availability of PFAS-free  
13 turnout gear and firefighting foam.

14 262. The turnouts and/or Class B foam designed, manufactured, marketed, tested,  
15 inspected, labeled, advertised, promoted, sold, and/or distributed by the Defendants were dangerous  
16 and defective in design or formulation because, when the PFAS-containing products left the hands of  
17 the manufacturer or distributors, these products posed significant health risks and were unreasonably  
18 dangerous in normal use.

19 263. The PFAS-containing turnouts and/or Class B foam did not perform as safely as an  
20 ordinary firefighter would have expected it to perform when used or misused in an intended or  
21 reasonably foreseeable way.

22 264. Further, knowing of the dangerous and hazardous properties of PFAS and/or PFAS-  
23 containing turnouts and/or Class B foam, Defendants could have manufactured, marketed,  
24 distributed, and/or sold alternative designs or formulations of fluorine-free chemicals, fluorine-free  
25 turnouts and/or Class B foam.

26 265. These alternative designs and/or formulations were already practical, similar in cost,  
27 technologically feasible and/or available.

28 266. Indeed, in the 1990s, DuPont had a viable replacement for PFOA that was less toxic,

1 less-bio-accumulative, but chose not pursue it. In the 2000s, multiple companies developed safer,  
2 effective fluorine-free foams. PFAS-free turnout gear is also available and feasible, and would be  
3 more widely available if its development, manufacture and sale were not hindered by Defendants'  
4 actions and misrepresentations.

5 267. The use of these alternative designs would have reduced or prevented the substantial  
6 likelihood of harm to Plaintiffs that was caused by the Defendants' design, manufacture, marketing,  
7 advertising, promotion, sale and/or distribution of PFAS and/or PFAS-containing turnouts and/or  
8 Class B foam.

9 268. Additionally, the turnouts and/or Class B foam that were designed, manufactured,  
10 marketed, tested, inspected, labeled, advertised, marketed, promoted, sold, and/or distributed by the  
11 Defendants contained PFAS or PFAS-containing materials that were so toxic and unreasonably  
12 dangerous to human health and the environment, with the toxic chemicals being highly mobile and  
13 persistent, that the act of designing, formulating, manufacturing, marketing, distributing, and/or  
14 selling these products was unreasonably dangerous and the foreseeable risks of causing serious health  
15 consequences exceeded the benefits associated with the design or formulation of PFAS-containing  
16 turnouts and/or Class B foam.

17 269. Defendants' design of toxic PFAS chemicals and/or PFAS-containing turnout gear  
18 and/or Class B foam was unreasonably dangerous and substantial factor in causing Plaintiffs' injuries.

19 270. As a result of Defendants' defective design, Defendants are liable for such injuries and  
20 damages to Plaintiffs.

21 271. Defendants acted with willful or conscious disregard for the rights, health, and safety  
22 of Plaintiffs, as described herein, thereby entitling Plaintiffs to an award of punitive damages.

#### 23 **FOURTH CAUSE OF ACTION**

##### 24 **NEGLIGENCE – FAILURE TO WARN**

25 272. This cause of action is asserted against all Defendants on behalf of all Plaintiffs.

26 273. Plaintiffs incorporate by reference all prior paragraphs of this complaint, as though  
27 fully set forth herein.

28 274. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities

1 they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing,  
2 labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-  
3 containing materials and, through that conduct, have knowingly placed PFAS-containing products  
4 into the stream of commerce with full knowledge that they were sold to fire departments and/or to  
5 companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as  
6 Plaintiffs.

7         275. Each Defendant, their predecessors-in-interest, and/or their alter egos, and/or entities  
8 they have acquired, have engaged in the business of manufacturing, distributing, supplying, testing,  
9 labeling, promoting, or advertising of turnouts and/or Class B foam containing PFAS or PFAS-  
10 containing materials and, through that conduct, have knowingly placed PFAS-containing products  
11 into the stream of commerce with full knowledge that they were sold to fire departments and/or to  
12 companies that sold turnouts and/or Class B foam to fire departments for use by firefighters, such as  
13 Plaintiffs.

14         276. Defendants' turnouts and/or Class B foam containing PFAS or PFAS-containing  
15 materials were unreasonably dangerous for their reasonably anticipated use because exposure to  
16 PFAS poses a significant threat to human health.

17         277. Defendants knew or should have reasonably known that the manner in which they  
18 were designing, manufacturing, testing, inspecting, labeling, marketing, distributing, and/or selling  
19 turnouts and/or Class B foam containing PFAS was hazardous to human health, and that firefighters,  
20 like Plaintiffs, would be exposed to PFAS through ordinary and foreseeable uses of turnouts and/or  
21 Class B foam in the course of engaging in firefighting activities and training.

22         278. Defendants had a duty to warn against such latent dangers resulting from foreseeable  
23 uses of its product of which it knew or should have known.

24         279. At the time of manufacture, distribution, promotion, labeling, distribution, and/or sale,  
25 Defendants could have provided warnings or instructions regarding the full and complete risks of  
26 turnouts and/or Class B foam containing PFAS or PFAS-containing materials.

27         280. Defendants, however, breached their duty and failed to provide adequate warnings as  
28 to the potential harm that might result from exposure to PFAS or PFAS-containing products that

1 would lead an ordinary reasonable user, such as Plaintiffs, to contemplate the danger to human health  
2 posed by such products.

3 281. In fact, Defendants failed to issue any warnings, instructions, recalls and/or advice as  
4 to the danger of exposure to the toxic PFAS-containing turnouts and/or Class B foam, and the  
5 potential for such exposure to cause serious physical injury and disease.

6 282. Defendants also did not instruct Plaintiffs on the proper steps they could take to reduce  
7 the harmful effects of previous exposure, the need to have periodic medical examinations including  
8 the giving of histories which revealed the details of the previous exposure, and the need to have  
9 immediate and vigorous medical treatment for all related adverse health effects.

10 283. Plaintiffs did not and could not have known that the use of turnouts and/or Class B  
11 foam in the ordinary course of performing their duties as firefighters could be hazardous to their  
12 health, bioaccumulate in the blood, and cause serious health effects, including cancer - dangers which  
13 were not obvious to Plaintiffs. Had Defendants adequately warned Plaintiffs, they would have heeded  
14 such warnings.

15 284. The burden on Defendants to guard against this foreseeable harm to Plaintiffs was  
16 minimal, and merely required that they provide adequate instructions, proper labeling, and sufficient  
17 warnings about their PFAS-containing products.

18 285. Defendants were in the best position to provide adequate instructions, proper labeling,  
19 and sufficient warnings about the PFAS-containing, turnouts and/or Class B foam and to take steps  
20 to eliminate, correct, or remedy any exposure or contamination they caused.

21 286. As a direct and proximate result of Defendants' negligent failure to provide adequate  
22 and sufficient warnings, Plaintiffs suffered the injuries and damages described herein for which  
23 Defendants are strictly liable.

24 287. Defendants acted with willful or conscious disregard for the rights, health, and safety  
25 of Plaintiffs, as described herein, thereby entitling Plaintiffs to an award of punitive damages.

26 **FIFTH CAUSE OF ACTION**

27 **LOSS OF CONSORTIUM**

28 288. This cause of action is asserted against all Defendants on behalf of all of the Spouse

1 Plaintiffs.

2 289. The Spouse Plaintiffs incorporate by reference all prior paragraphs of this complaint,  
3 as though fully set forth herein.

4 290. At all times relevant to this action, the following Plaintiffs were and are now lawfully  
5 married:

- 6 i. Firefighter Plaintiff John Charcho and Spouse Plaintiff Mara Charcho.
- 7 ii. Firefighter Plaintiff Daniel DeLong and Spouse Plaintiff Karla DeLong.
- 8 iii. Firefighter Plaintiff Erin Thomas and Spouse Plaintiff Holly Yip Thomas.
- 9 iv. Firefighter Plaintiff Richard Jones and Spouse Plaintiff Joyce Jones.

10 291. As alleged above, and as a result of the conduct of the Defendants, Firefighter  
11 Plaintiffs sustained severe and permanent injuries and damages.

12 292. As a proximate result of their husbands' injuries sustained from the exposure and use  
13 of Class B foam and/or turnouts in the ordinary course of performing their firefighting duties, the  
14 Spouse Plaintiffs were deprived of love, companionship, comfort, care, assistance, protection,  
15 affection, society, moral support, sexual relations and conjugal fellowship, during their husbands'  
16 illnesses, treatments and recoveries, which deprivation has caused, continues to cause, and in the  
17 future is expected to cause each of the Spouse Plaintiffs emotional distress; loss of earning capacity;  
18 past, present, and future, and other injuries – the full extent of which has not yet been ascertained, but  
19 which will be stated according to proof at trial.

20 293. As a further direct and proximate result of the aforesaid conduct of Defendants, each  
21 of the Spouse Plaintiffs has sustained a loss of consortium, love, society, comfort and affection, and  
22 has thereby sustained pecuniary losses, which losses will be stated according to proof at trial.

23

24 **PRAYER FOR RELIEF**

25 WHEREFORE, Plaintiffs respectfully prays that this Court grant the following relief:

- 26 (1) Compensatory damages, including but not limited to, pain, suffering, emotional  
27 distress, loss of enjoyment of life, and other non-economic damages in an amount  
28 according to proof at time of trial;

- 1 (2) Compensatory damages for future damages, including but not limited to Plaintiffs’  
2 pain and suffering and for severe permanent personal injuries sustained by the  
3 Firefighter Plaintiffs, including for future health care costs, medical monitoring,  
4 and/or economic loss.
- 5 (3) Economic damages including but not limited to medical expenses, out of pocket  
6 expenses, lost earnings and other economic damages in an amount to be determined  
7 at trial;
- 8 (4) Punitive and/or exemplary damages for the wanton, willful, fraudulent, and reckless  
9 acts of the Defendants, who demonstrated a conscious disregard and reckless  
10 indifference for the safety and welfare of the public in general and of the Plaintiffs in  
11 particular, in an amount sufficient to punish Defendants and deter future similar  
12 conduct, to the extent allowed by applicable law;
- 13 (5) Pre-judgment and post-judgment interest, at the legal rate, on all amounts claimed;
- 14
- 15 (7) For equitable and injunctive relief, as necessary, to ensure that Defendants refrain  
16 from continuing to harm others; and
- 17 (8) Any such further relief as this Court deems just and proper.

18  
19 **DEMAND FOR JURY TRIAL**

20 Plaintiffs hereby demand a jury trial for each cause of action for which they are entitled to a  
21 jury trial.

22 DATED: February 15, 2022

**PRITZKER LEVINE LLP**

23  
24 

25 By:

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